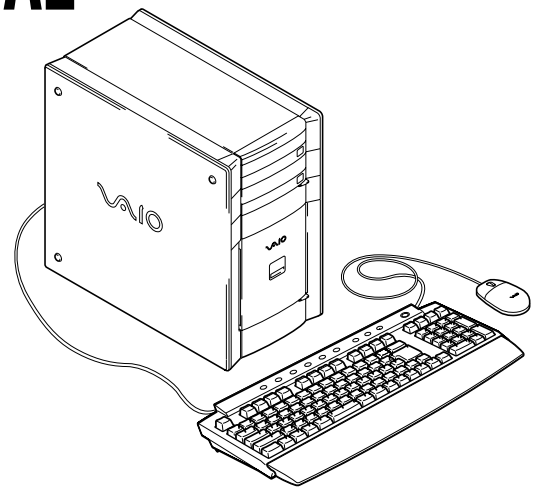
PCV-RX360DS/RX370DS/RX380DS

SERVICE MANUAL

US Model
Canadian Model

Ver 2-2003L

Revision History



S400

VAIO

Specifications

PERSONAL COMPUTER VAIO

SONY

9-928-395-12

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CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

Service and Inspection Precautions

1. Obey precautionary markings and instructions

Labels and stamps on the cabinet, chassis, and components identify areas requiring special precautions. Be sure to observe these precautions, as well as all precautions listed in the operating manual and other associated documents.

2. Use designated parts only

The set's components possess important safety characteristics, such as noncombustibility and the ability to tolerate large voltages. Be sure that replacement parts possess the same safety characteristics as the originals. Also remember that the (⚠ mark, which appears in circuit diagrams and parts lists, denotes components that have particularly important safety functions; be extra sure to use only the designated components.

3. Always follow the original design when mounting parts and routing wires

The original layout includes various safety features, such as inclusion of insulating materials (tubes and tape) and the mounting of parts above the printer board. In addition, internal wiring has been routed and clamped so as to keep it away from hot or high-voltage parts. When mounting parts or routing wires. therefore, be sure to duplicate the original layout.

4. Inspect after completing service

After servicing, inspect to make sure that all screws, components, and wiring have been returned to their original condition. Also check the area around the repair location to ensure that repair work has caused no damage, and confirm safety.

5. When replacing chip components...

Never reuse components. Also remember that the negative side of tantalum capacitors is easily damaged by heat.

6. When handling flexible print boards...

- The temperature of the soldering-iron tip should be about 270C.
- Do not apply the tip more than three times to the same pattern.
- Handle patterns with care; never apply force.

Caution: Remember that hard disk drives are easily damaged by vibration. Always handle with care.

TABLE OF CONTENTS

1. OPERATION 1-1

2. DISASSEMBLY

2-1. Flow Chart 2-1
2-2. Top Panel Section 2-2
2-3. Left Panel Section 2-2
2-4. DVD-ROM, CD-RW 2-3
2-5. Switching Power
(PCV-RX360DS) 2-4
(PCV-RX370DS/RX380DS) 2-4
2-6. HDD 2-5
2-7. PCI Slot Panel 2-5
2-8. VGA Card (PCV-RX370DS/RX380DS) 2-6
2-9. Modem Card (PCI) 2-6
2-10. Panel Ass'y (Upper) (For 2 Bay) 2-7
2-11. Front Panel Ass'y (Lower) (US) 2-7
2-12. Right Panel 2-8
2-13. CNX-138 Board 2-8
2-14. SWX-66 Board 2-9
2-15. FDD 2-9
2-16. Memory, CRIMM
(PCV-RX360DS) 2-10
(PCV-RX370DS/RX380DS) 2-10
2-17. CPU
(PCV-RX360DS) 2-11
(PCV-RX370DS/RX380DS) 2-11
2-18. Mother Board 2-12
2-19. Main Electric Parts Arrangement
(PCV-RX360DS) 2-13
(PCV-RX370DS/RX380DS) 2-13

3. MOTHER BOARD DESCRIPTION

3-1. CUSL-LV MOTHER BOARD
(for PCV-RX360DS) 3-1
3-1-1. Overview 3-1
3-1-2. Form Factor 3-1
3-1-3. Connectors and Headers 3-1
3-1-4. Audio 3-1
3-1-5. Graphics 3-1
3-1-6. IEEE 1394 OHCI 3-2
3-1-7. LAN 3-2
3-1-8. Other Key Components 3-2
3-1-9. BIOS 3-2
3-1-10. Power Management 3-2
3-1-11. PS2 Keyboard / Mouse 3-2
3-1-12. Floppy Drive Support 3-2
3-1-13. CD-ROM / DVD-ROM Drive Support 3-2
3-1-14. IDE Drive Support 3-2
3-1-15. Main Memory 3-2
3-1-16. Battery Requirements 3-2
3-1-17. Reliability 3-2
3-1-18. Mother Board Environment Specification 3-2
3-1-19. Power Supply / Consumption 3-3
3-1-20. WHQL 3-3
3-1-21. Label Requirements 3-3
3-1-22. Regulatory Compliance 3-3

3-2. WMT-LX MOTHER BOARD
(for PCV-RX370DS/RX380DS) 3-4
3-2-1. Overview 3-4
3-2-2. Form Factor 3-4
3-2-3. Connectors and Headers 3-4
3-2-4. Audio 3-4
3-2-5. AGP Graphics 3-4
3-2-6. IEEE 1394 OHCI 3-4
3-2-7. LAN 3-5
3-2-8. Other Key Components 3-5
3-2-9. BIOS 3-5
3-2-10. Power Management 3-5
3-2-11. PS2 Keyboard / Mouse 3-5
3-2-12. Floppy Drive Support 3-5
3-2-13. CD-ROM / DVD-ROM Drive Support 3-5
3-2-14. IDE Drive Support 3-5
3-2-15. Main Memory 3-5
3-2-16. Battery Requirements 3-5
3-2-17. Reliability 3-5
3-2-18. Mother Board Environment Specification 3-5
3-2-19. Power Supply / Consumption 3-5
3-2-20. WHQL 3-6
3-2-21. Label Requirements 3-6
3-2-22. Regulatory Compliance 3-6

4. PROGRAMS FOR SERVICE

4-1. General 4-1
4-2. PC-Doctor Starting Method 4-1
4-3. Intel 815 Video Diag Starting Method 4-1
4-4. nVIDIA Geforce Video Diag Starting Method 4-1
(For PCV-RX370DS)
4-5. nVIDIA Geforce Video Diag Starting Method 4-2
(For PCV-RX380DS)

5. SERVICE INFORMATION

5-1. Jumper Setting on Hard Disk Drive 5-1
5-2. Jumper Setting of Motherboard 5-3

6. FRAME HARNESS

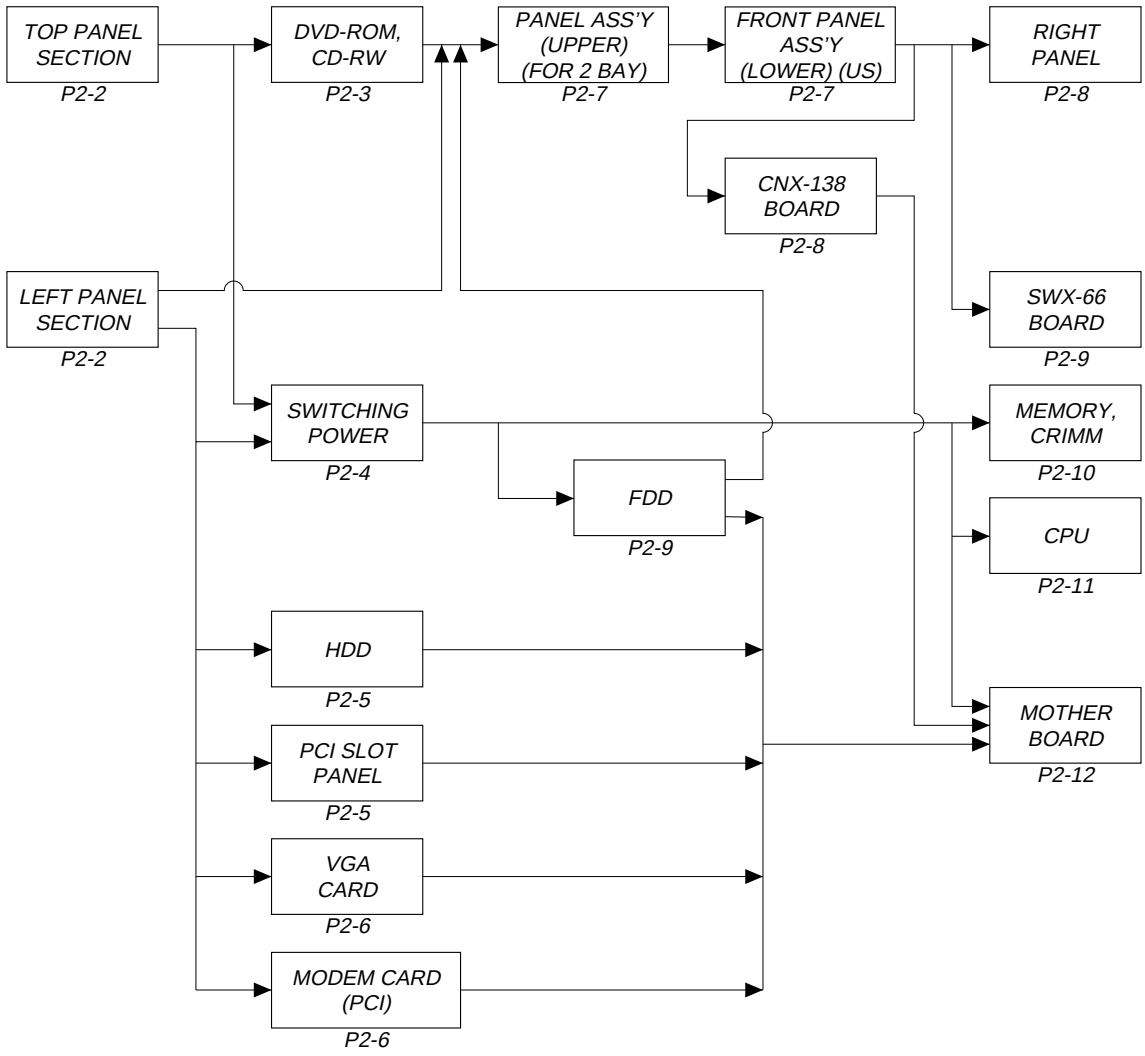
6-1. Connector List
1. CUSL-LV MOTHER BOARD
(for PCV-RX360DS) 6-1
2. WMT-LX MOTHER BOARD
(for PCV-RX370DS/RX380DS) 6-4
6-2. Frame Harness Diagram
(for PCV-RX360DS) 6-7
(for PCV-RX370DS/RX380DS) 6-9

7. REPAIR PARTS LIST

7-1. Exploded Views and Parts List (PCV-RX360DS) .. 7-1
7-2. Exploded Views and Parts List (PCV-RX370DS) .. 7-3
7-3. Exploded Views and Parts List (PCV-RX380DS) .. 7-5
7-4. Accessories and Parts List 7-8

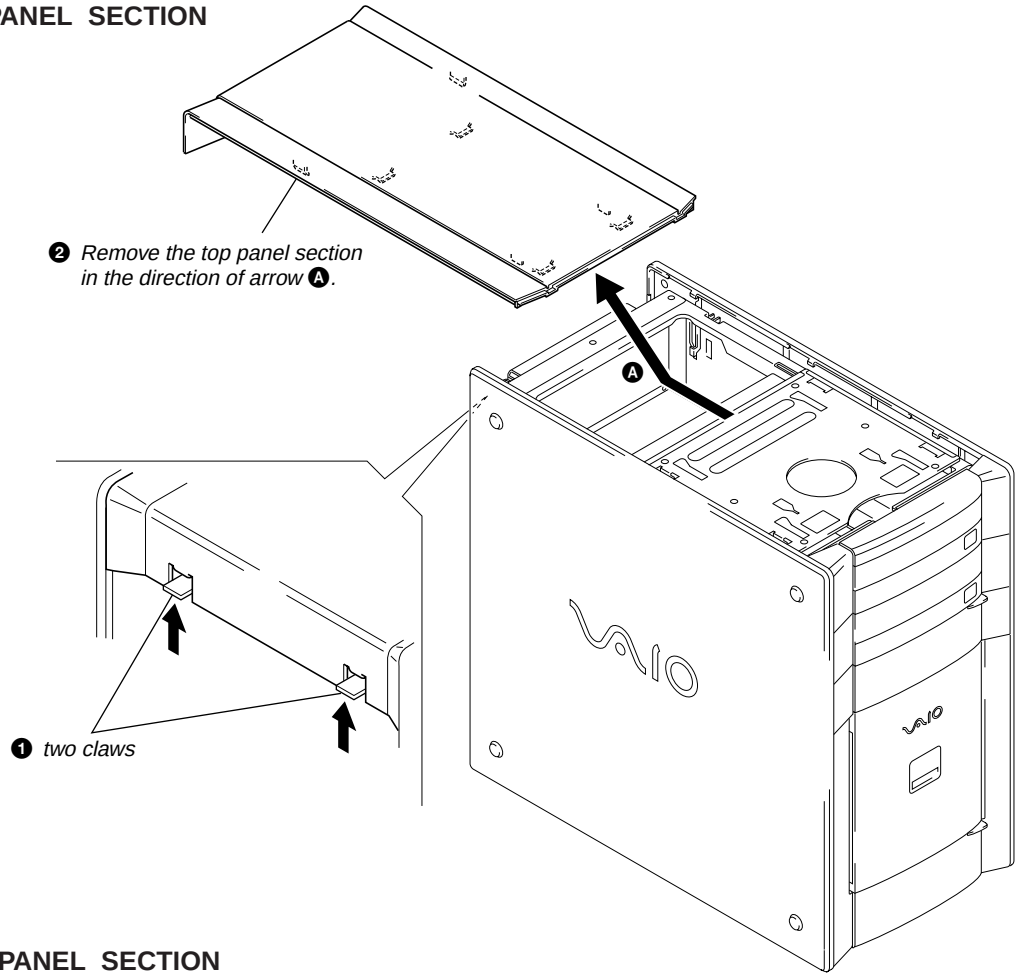
SECTION 2
DISASSEMBLY

2-1. FLOW CHART

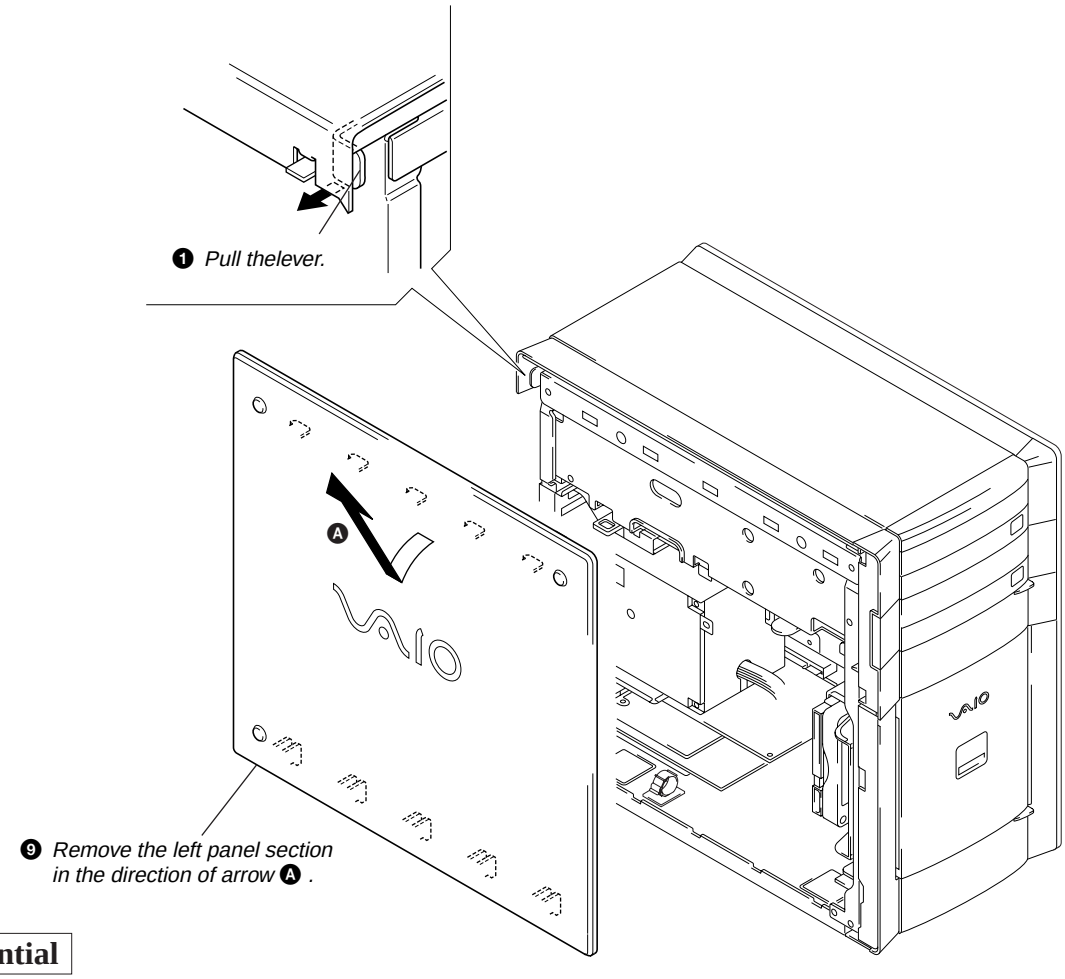


- P☐-☐ denotes the page concerned.
- HDD has a low resistance to vibration, requiring careful handling.

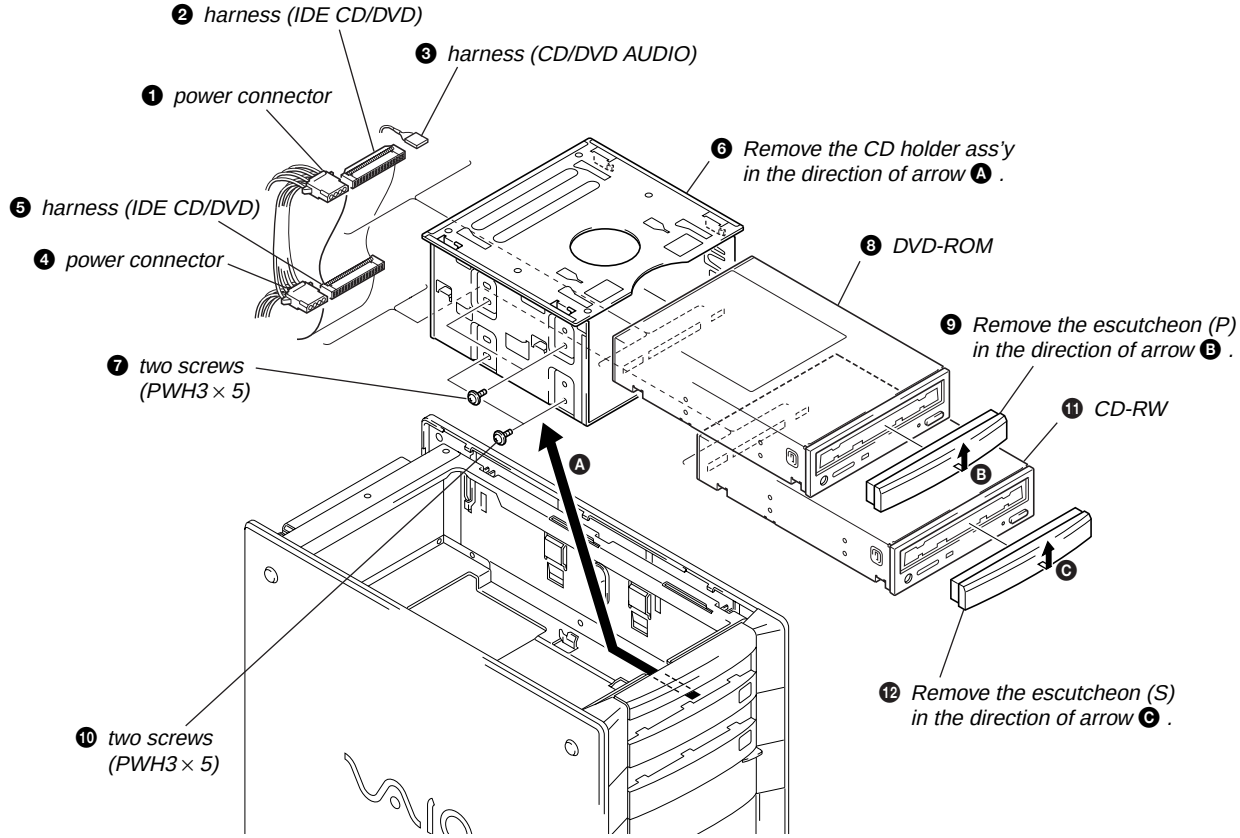
2-2. TOP PANEL SECTION



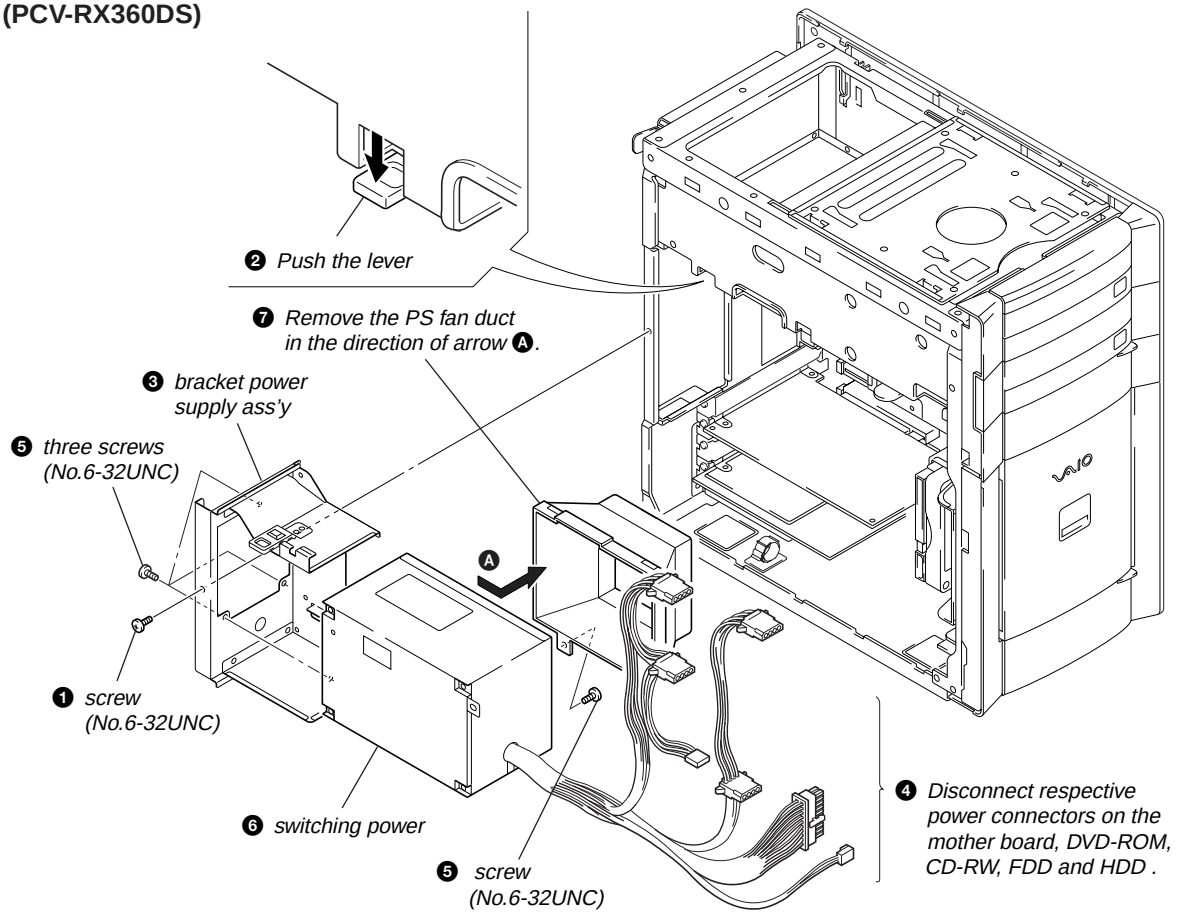
2-3. LEFT PANEL SECTION



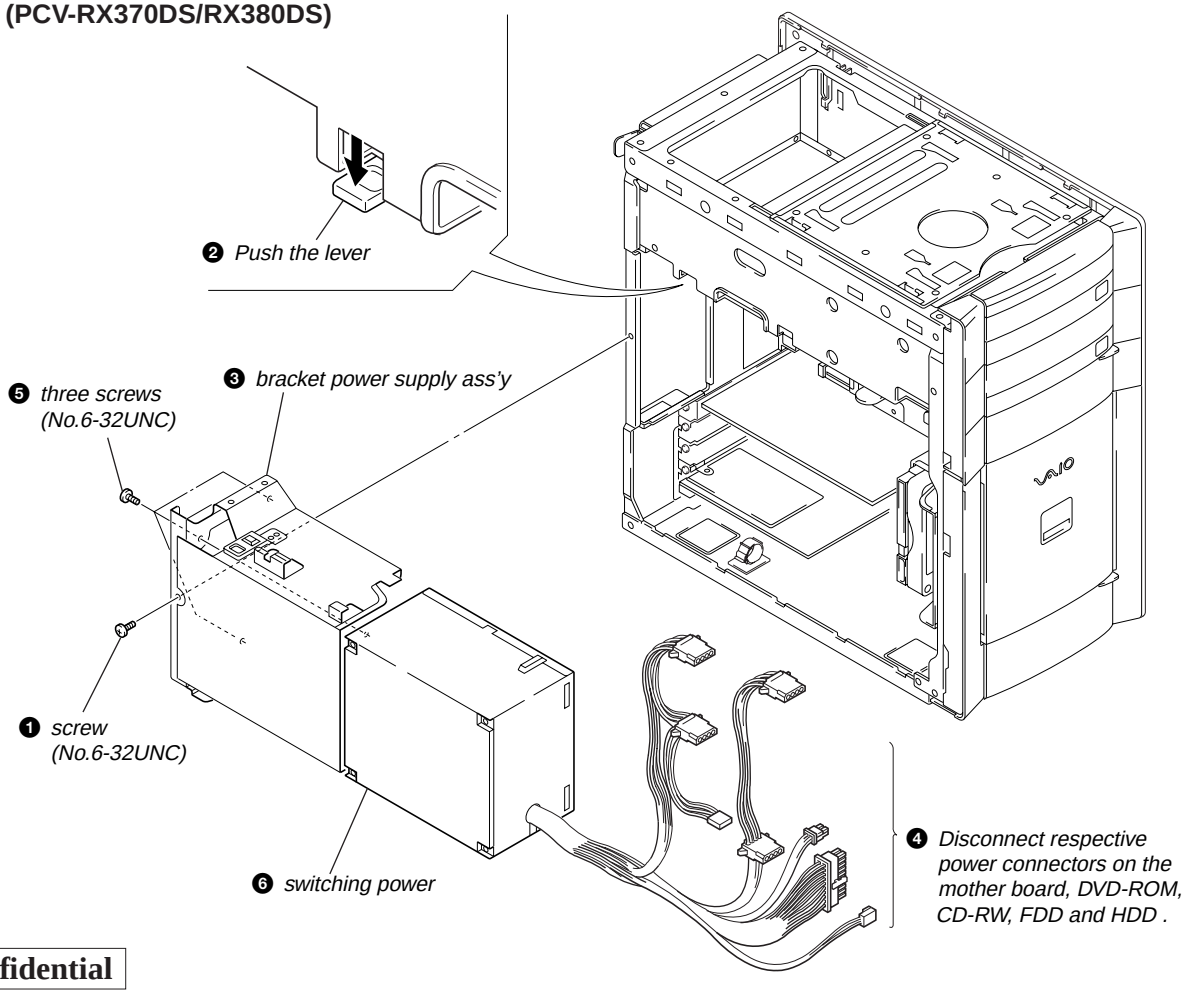
2-4. DVD-ROM, CD-RW


❷ harness (IDE CD/DVD)
❸ harness (CD/DVD AUDIO)
❶ power connector
❻ Remove the CD holder ass'y in the direction of arrow Ⓐ .
❺ harness (IDE CD/DVD)
❹ power connector
❽ DVD-ROM
❾ Remove the escutcheon (P) in the direction of arrow Ⓑ .
❼ two screws (PWH3 × 5)
⓫ CD-RW
Ⓐ
Ⓑ
Ⓒ
⓬ Remove the escutcheon (S) in the direction of arrow Ⓒ .
❿ two screws (PWH3 × 5)

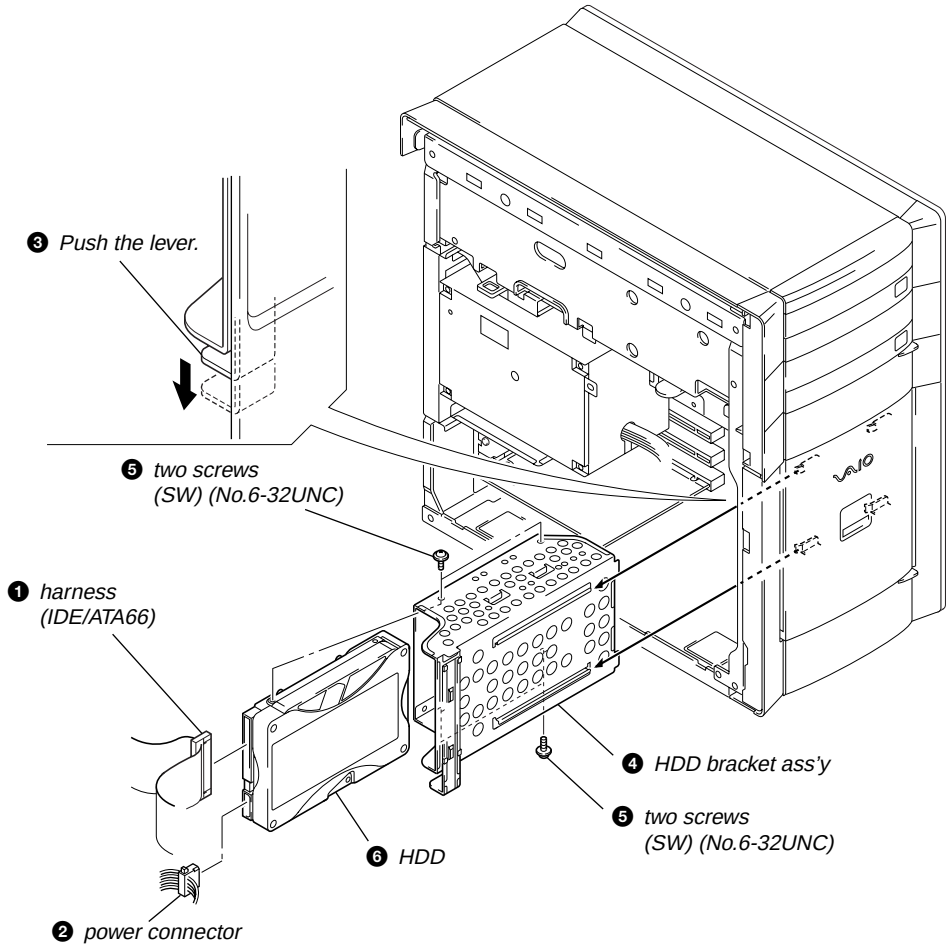
2-5. SWITCHING POWER (PCV-RX360DS)


❷ Push the lever
❼ Remove the PS fan duct in the direction of arrow Ⓐ.
❸ bracket power supply ass'y
❺ three screws (No.6-32UNC)
Ⓐ
❶ screw (No.6-32UNC)
❻ switching power
❺ screw (No.6-32UNC)
❹ Disconnect respective power connectors on the mother board, DVD-ROM, CD-RW, FDD and HDD .

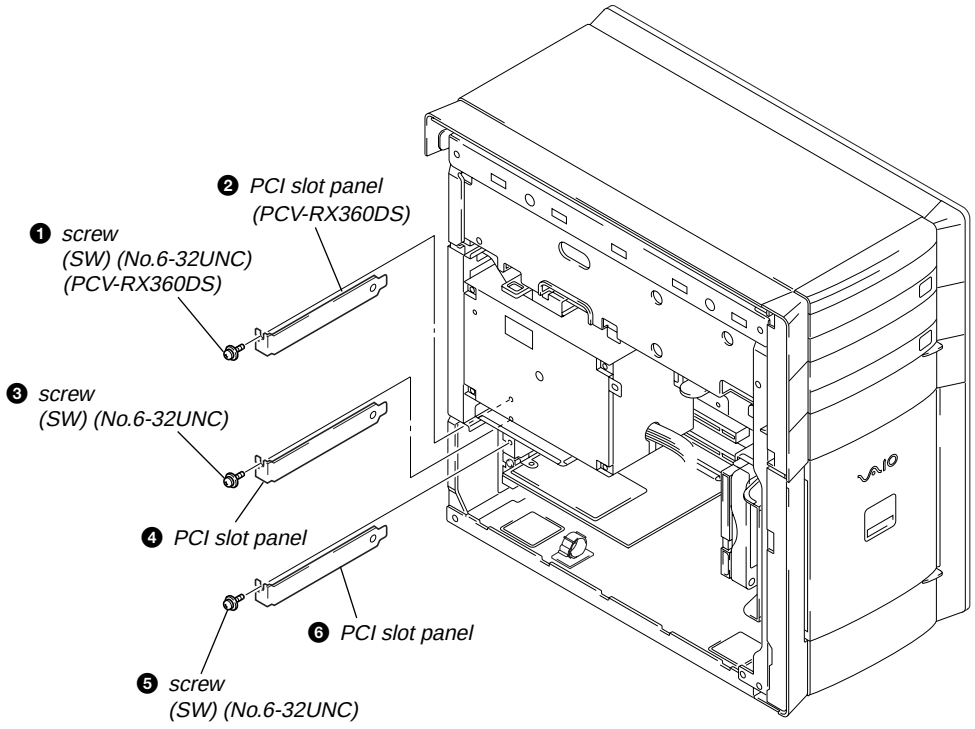
(PCV-RX370DS/RX380DS)


❷ Push the lever
❸ bracket power supply ass'y
❺ three screws (No.6-32UNC)
❶ screw (No.6-32UNC)
❻ switching power
❹ Disconnect respective power connectors on the mother board, DVD-ROM, CD-RW, FDD and HDD .

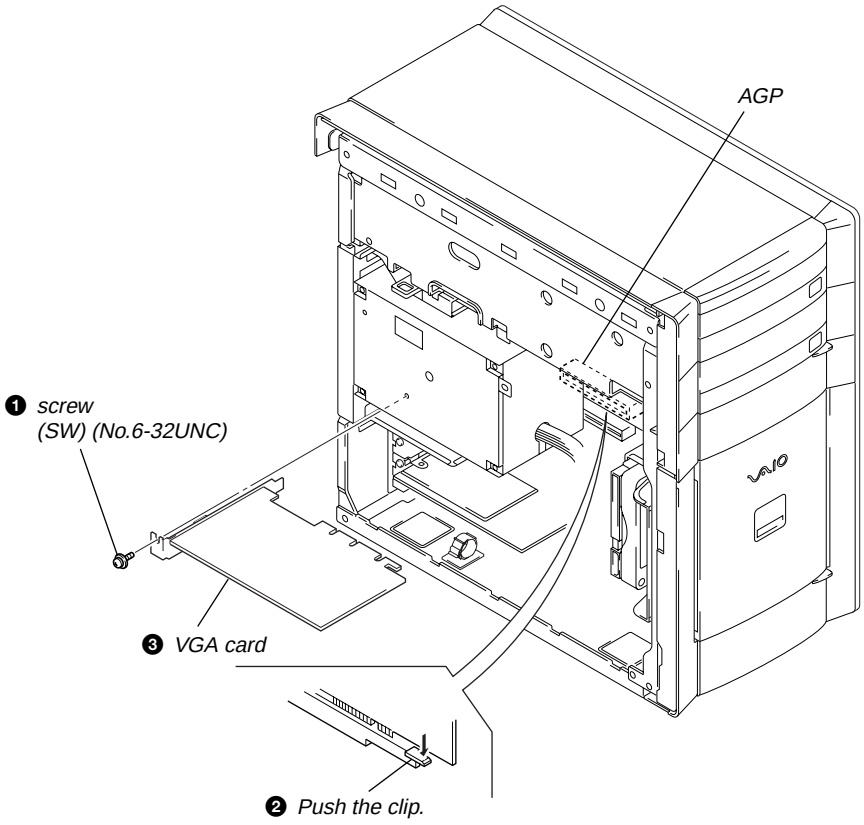
2-6. HDD



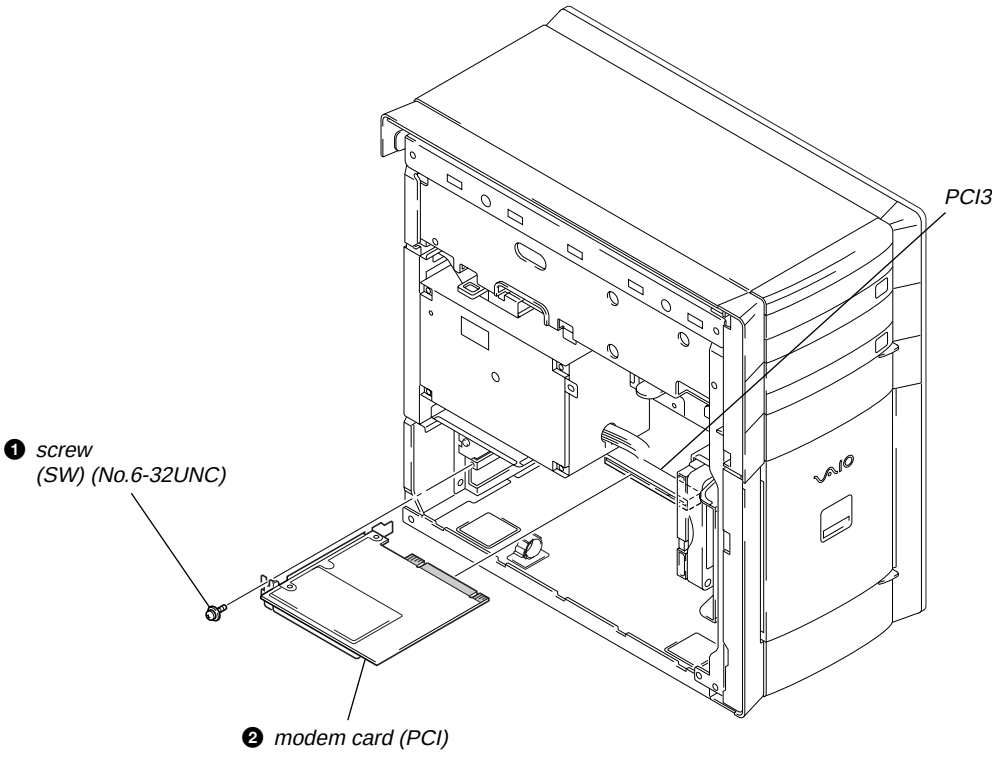
2-7. PCI SLOT PANEL



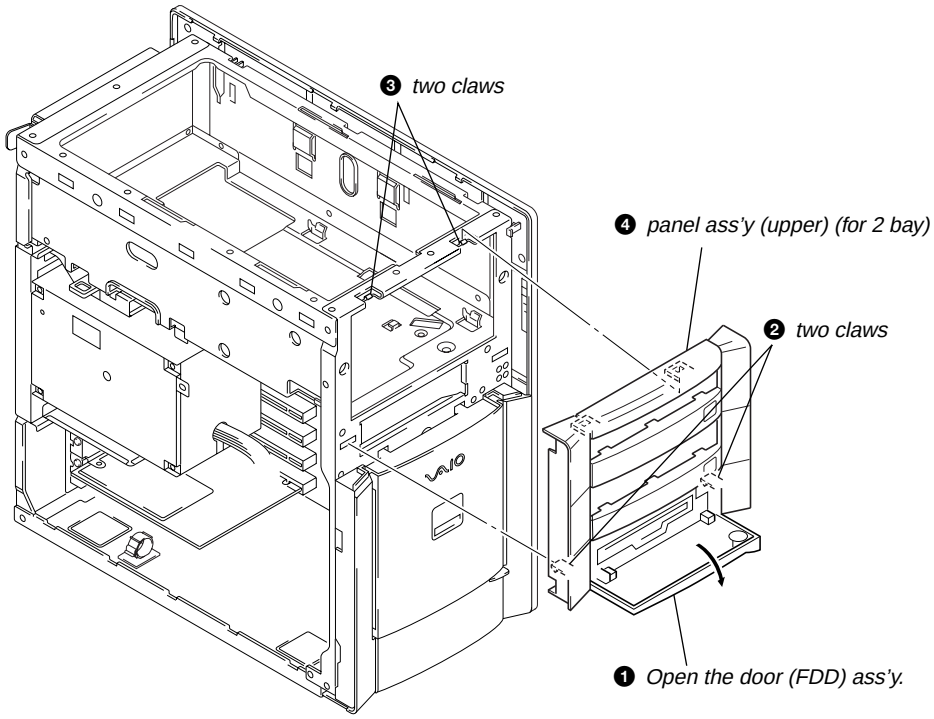
2-8. VGA CARD (PCV-RX370DS/RX380DS)



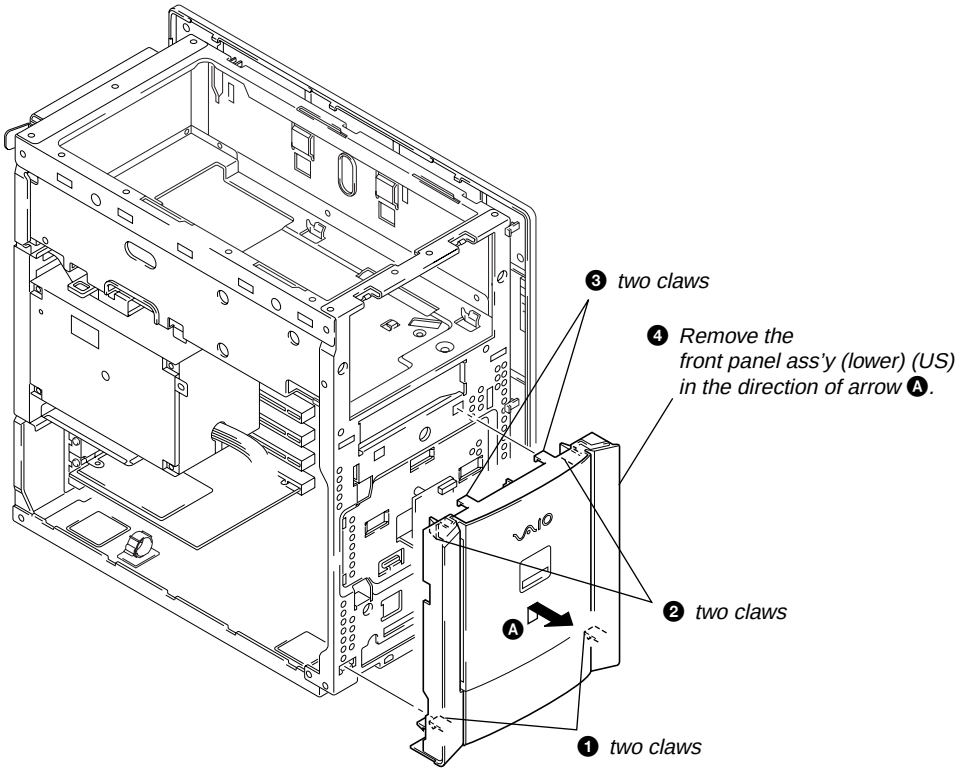
2-9. MODEM CARD (PCI)



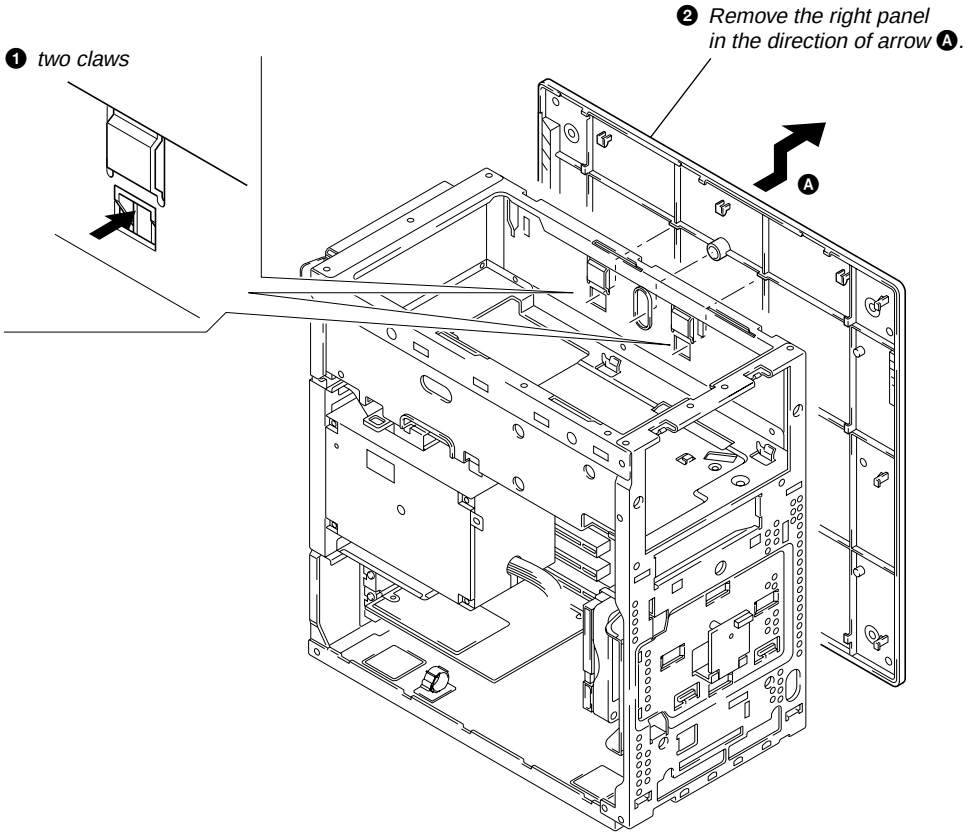
2-10. PANEL ASS'Y (UPPER) (FOR 2 BAY)



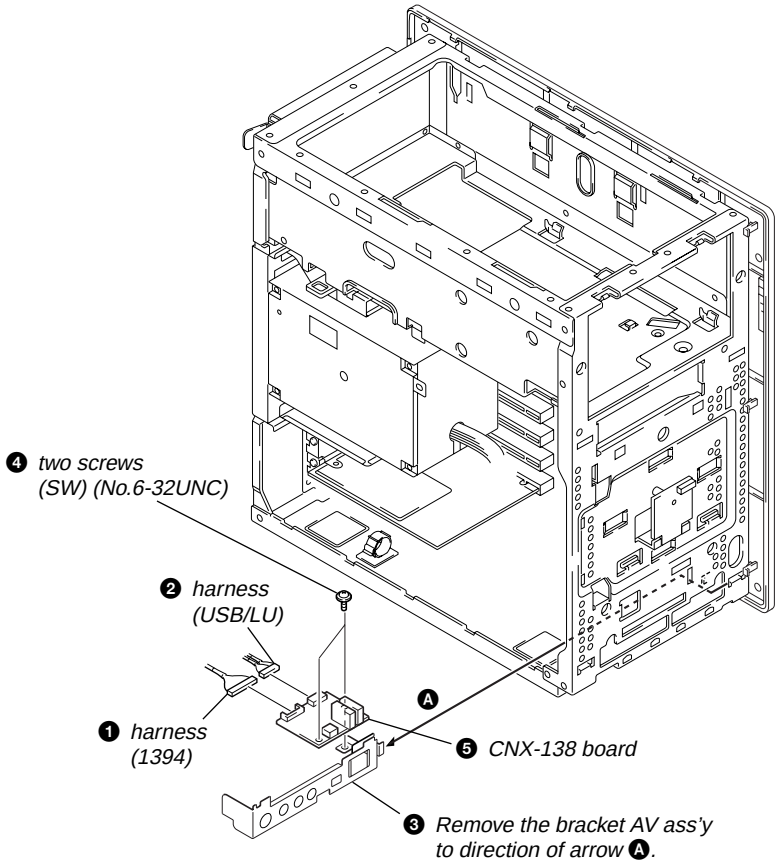
2-11. FRONT PANEL ASS'Y (LOWER) (US)



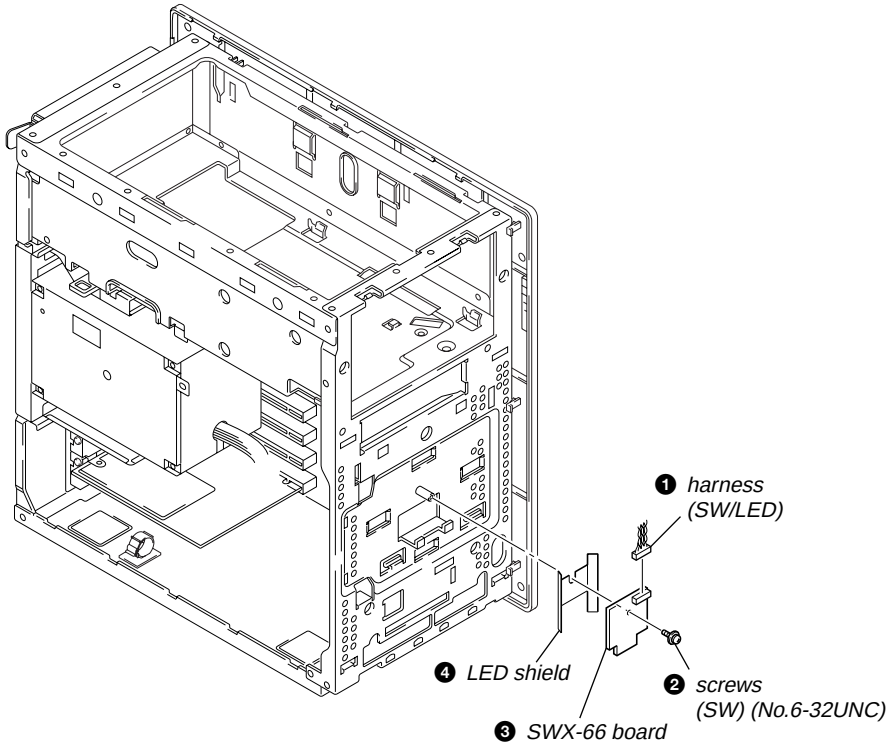
2-12. RIGHT PANEL



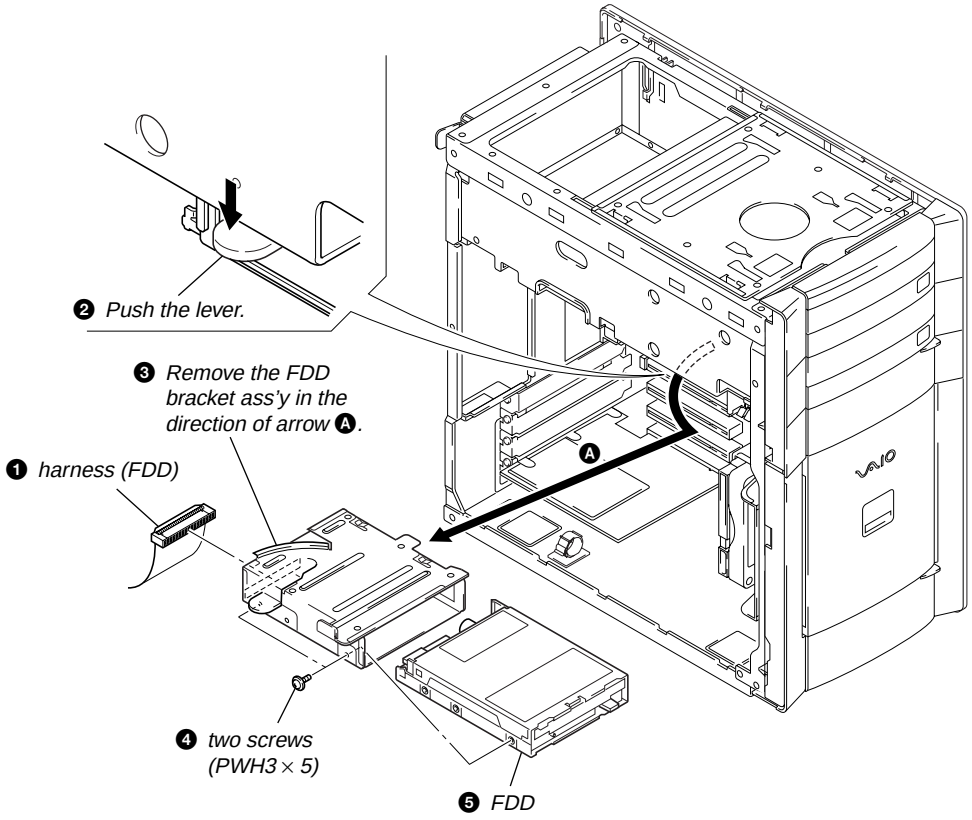
2-13. CNX-138 BOARD



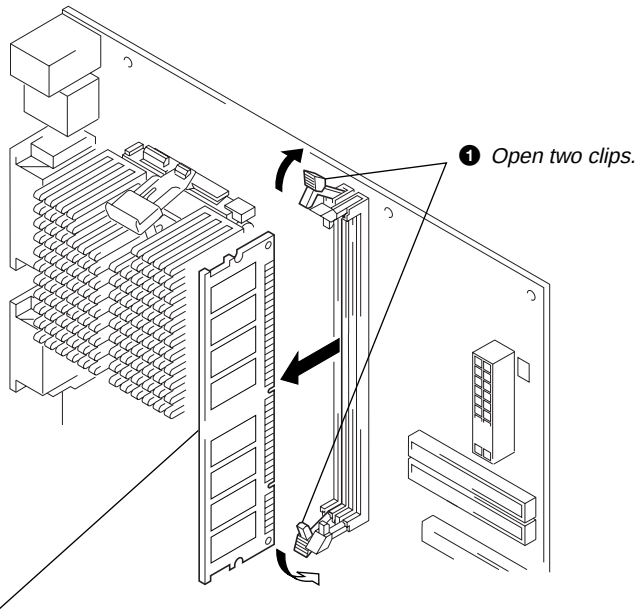
2-14. SWX-66 BOARD



2-15. FDD



2-16. MEMORY, CRIMM (PCV-RX360DS)

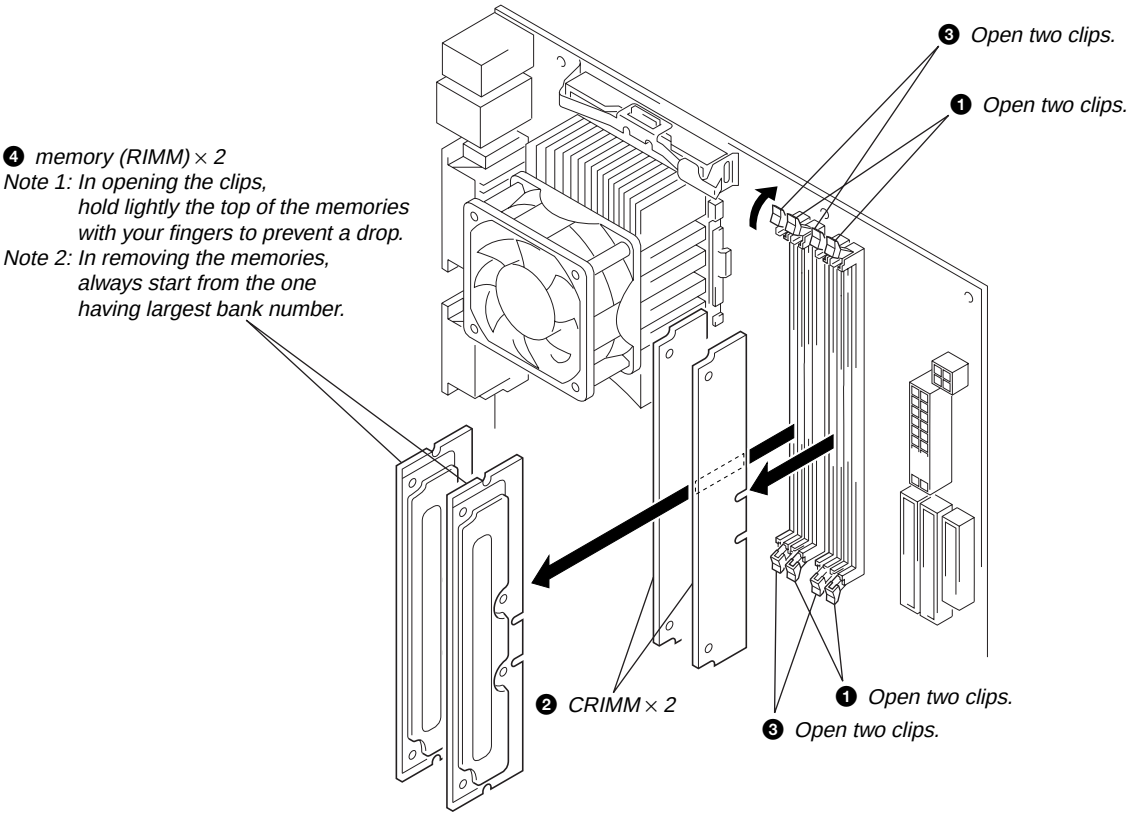


❷ *memory (DIMM)*

Note 1: In opening the clips, hold lightly the top of the memories with your fingers to prevent a drop.

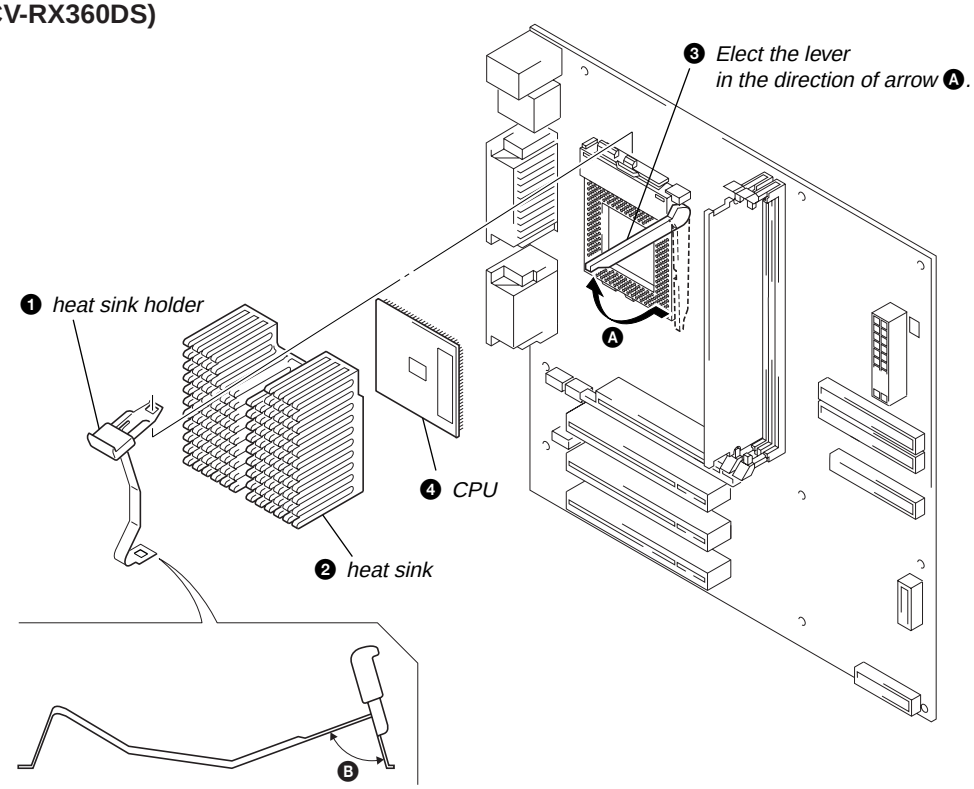
Note 2: In removing the memories, always start from the one having largest bank number.

(PCV-RX370DS/RX380DS)


❸ Open two clips.
❶ Open two clips.
❹ memory (RIMM) × 2
Note 1: In opening the clips, hold lightly the top of the memories with your fingers to prevent a drop.
Note 2: In removing the memories, always start from the one having largest bank number.
❷ CRIMM × 2
❶ Open two clips.
❸ Open two clips.

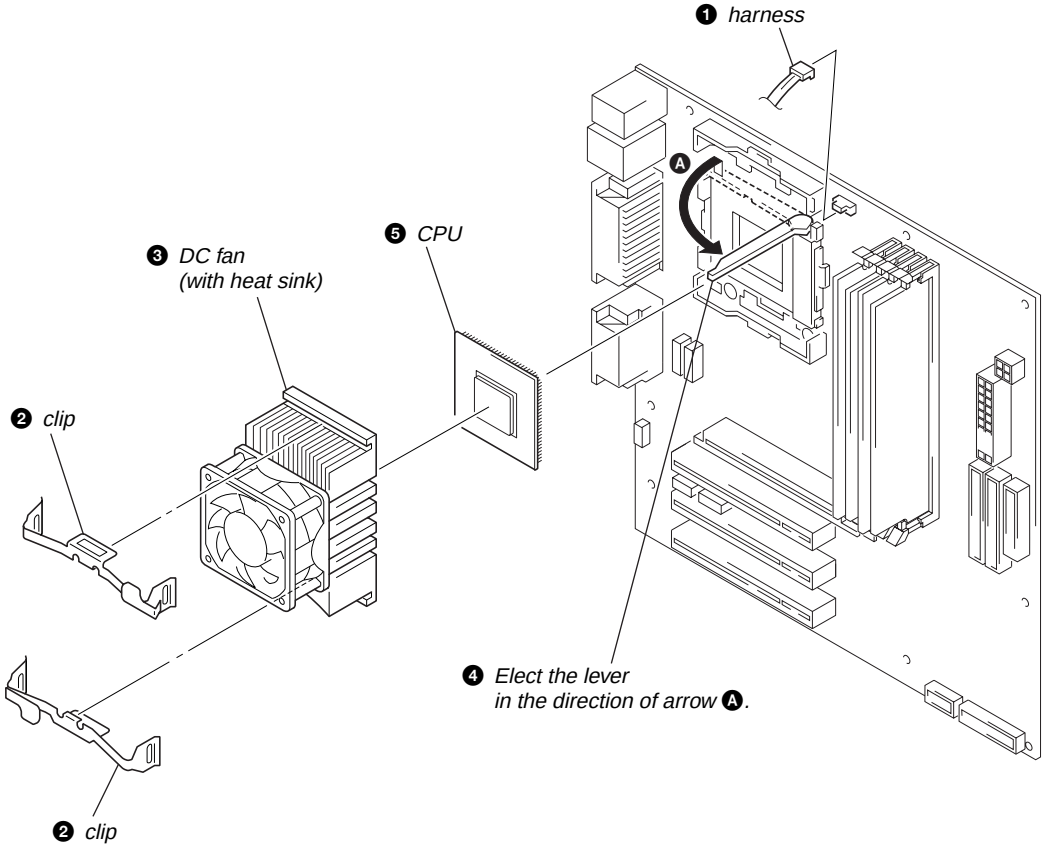
2-17. CPU

(PCV-RX360DS)

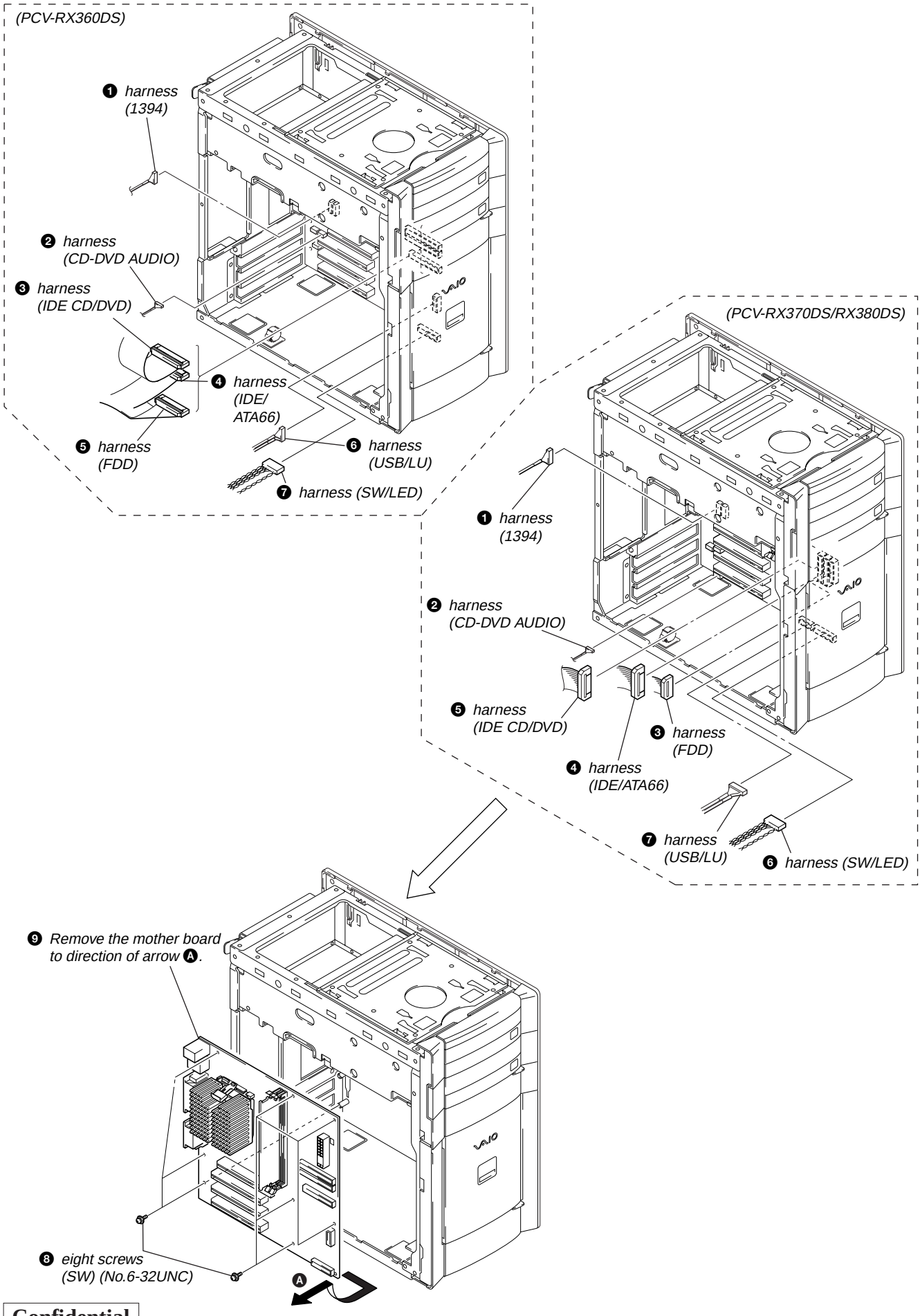


Precaution on mounting the heat sink holder:
Check that the angle Ⓑ shown in figure does not exceed 90 degrees, when the heat sink was removed or if the heat sink mounting failed.
If over 90 degrees, bend it to recover the original condition (within 90 degrees).
Do not reuse the heat sink holder that deformed over 120 degrees, and use a new part.

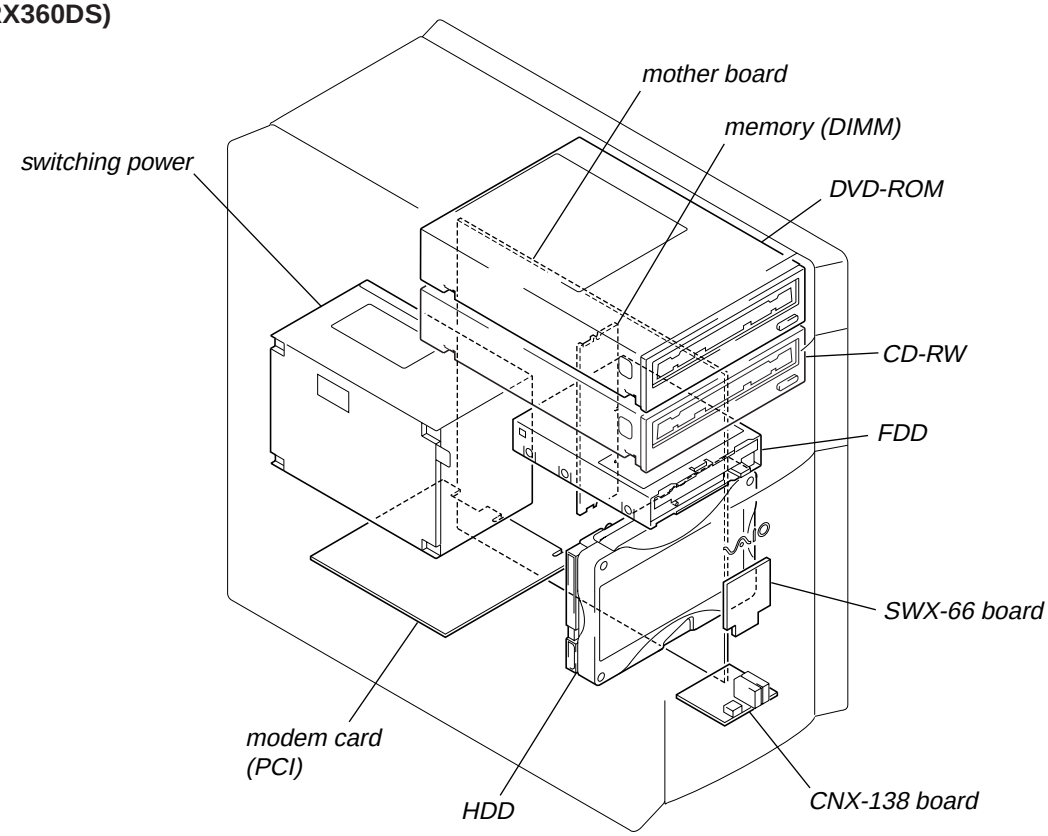
(PCV-RX370DS/RX380DS)



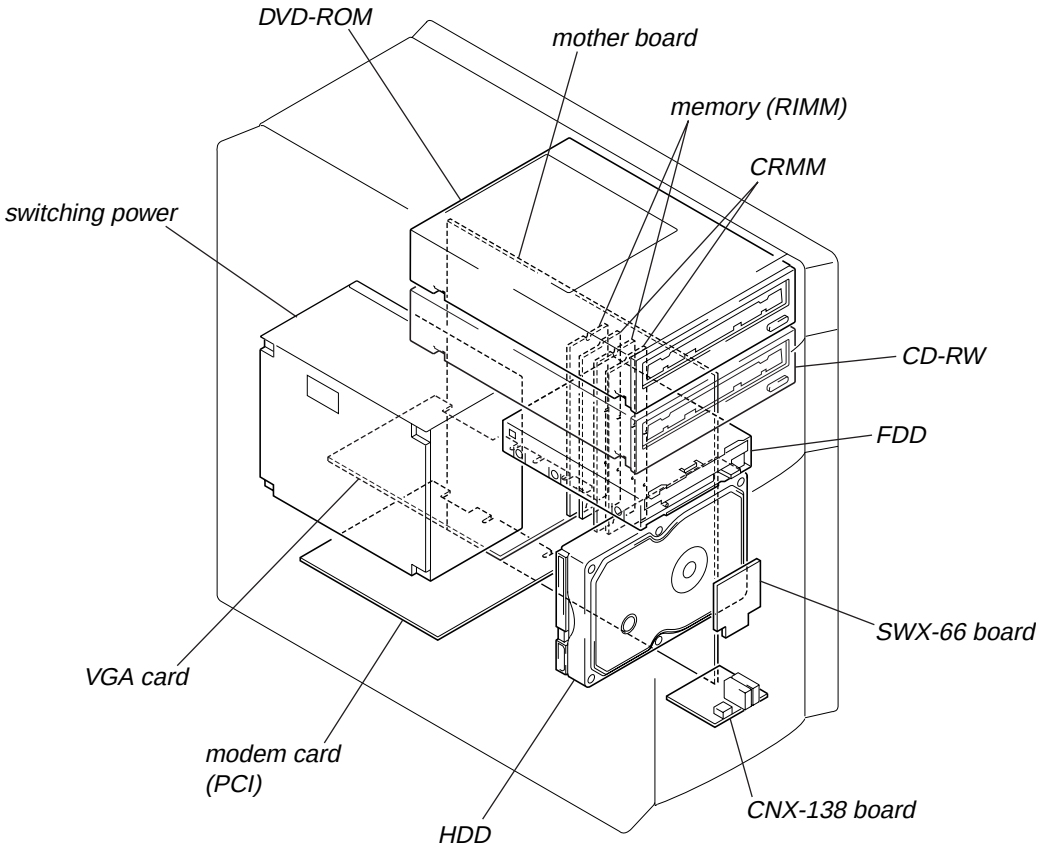
2-18. MOTHER BOARD



2-19. MAIN ELECTRIC PARTS ARRANGEMENT (PCV-RX360DS)



(PCV-RX370DS/RX380DS)



3-1-1 Overview

This document describes the specification for the ***CUSL-LV*** motherboard for PCV-RX360DS.

- MicroATX version1.0 compatible
- PGA370 socket, Coppermine-128k/256K, all speeds, voltages, bus frequencies support. Can support 133MHz/100MHz/66MHz FSB.
- VRM 8.4 Rev 1.6 support.
- Intel 815 chipset (Solano1)
- AGP interface specification revision 2.0 compliance (support 2x/4x)
- AGP Card retention support
- Hardware monitoring FAN (CPU,PS) speed monitor/CPU Temp/sensor/Voltage monitor
- Two 168-pin DIMM sockets (SDRAM, maximum 512Mbytes NonECC)
- PC133/PC100
- LPC I/F I/O Controller
- One AGP, Three PCI slots and NO ISA slot
- On board Ethernet
- Suspend to RAM support (Wake up from Keyboard, Mouse, LAN, USB, Power button)
- Ultra DMA/66 enable (can support Host-side Detection)
- On board IEEE1394 OHCI
- Header for Front accessible IEEE1394 connector.
- Header for Front-accessible USB connector.
- Keyboard/Mouse mixed signal (Notebook style)
- On board AC97 2.0 Codec Audio
- Flash BIOS(Firmware Hub)
- No Q-salt capacitors
- PC99 Compliant
- PCI 2.2
- Heat sink grounding support for CPU

3-1-2 Form Factor

Meet Intel MicroATX version 1.0 specification

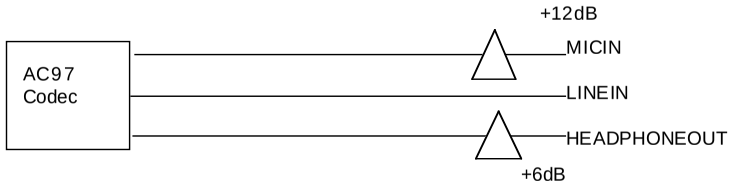
- maximum 9.6inches x 9.6 inches(244mmx244mm)
- height restrictions of MicroATX version 1.0

3-1-3 Connectors and Headers

- ATX power supply power connector , Power Supply Fan connector
- 1 FDD/2 IDE Connectors
- 2 168pin DIMM socket (gold plated)
- PGA370 socket
- 3 PCI slot and 1 AGP slot
- 4-pin CD-ROM audio input (stereo) connector
- 4-pin AUX audio input (stereo) connector
- 4-pin Video input (stereo) connector
- 1 Optical Digital Audio(SPDIF) output header with codec supporting SPDIF functions
- One IEEE1394(6pin) standard interface connector, two headers
- 4 USB port connector (2 for rear I/O, 2 with header for Front accessible area)
- Power/Sleep/HDD/LED2/Reset/Speaker header (Front Panel I/O header)
- 1 Parallel(25pin) connector
- 1 Serial (COM1, 9pin) connector in rear I/O
- 2 PS2 connector(Keyboard, Mouse)
- SOFA (Paddle) connector
- Line In/Mic In/Headphone Out mini-jack
- 1Cooling Fan connector(CPU)
- Clear password header (for BIOS)
- CPU Clock select(optional)
- Thermal measurement header
- Ethernet Connector

3-1-4 Audio

- AC97 codec
- Circuit for utilizing soft audio required
- Legacy DOS support
- external +12dB boost add for MIC IN input(Single Powered OP-amp required)
- +6dB boost with power amplifier add for HEADPHONE OUT (LM4880 or equivalent)
- Audio Quality meet PC99 specs
  - D to A SNR +85dB, THD +65dB FSA
  - A to D SNR +80dB, THD +60dB FSA
  - A to A SNR +85dB, THD +55dB FSA (LINE IN to LINE OUT, 1kHz sine wave, 0dB=1Vrms)
  - MIC SNR +75dB (-12kHz)
- EMI filters (or equivalent consideration) on HEADPHONE OUT/LINE IN/GAME PORT for FC C/VCCI
- Optional SPDIF digital serial output with codec supporting SPDIF functions
- Pop noise cancel function.
- Audio enable/disable control circuit and controlled by the BIOS.



	Specs(tentative)	Notes
Line In	1Vrms(typ) 2Vrms(max)	10k ohm impedance
Headphoneout (line out)	1.5 Vrms(max)	32 ohm load(drive headphone)
	2 Vrms(max)	10k ohm load
Mic In	0.1 Vrms(max)	Codec Boost Off

3-1-5 Graphics

- 815Gfx and AGP connector support
- 815, AGP swappable use
- 815 Graphics
  - Intel815 Chipset Integrated Graphics
  - Soft DVD support (MC support)
  - AIMM support
- AGP Graphics
  - 2x/4x AGP interface
  - use the universal connector
  - Support the retention module
  - AGP Interface Specification Rev 2.0 (From Intel)
  - AGP Card Retention Specification rev 1.0 (From Intel)

3-1-6 IEEE 1394 OHCI

- Texas Instrument TSB41AB3 PHY (physical layer)
- Texas Instrument TSB12LV26 LINK (link layer)
- Power provide +12V, 5W/port
- EMI filters (TOKO 857CM-009) on the IEEE1394 Front access header/Rear access option header/Rear connector for FCC/VCCI
- IEEE1394 enable/disable control circuits and controlled by the BIOS.
- PHY power provided by the 3VSB_DUAL (S5) and maximum current is 200mA.

3-1-7 LAN

- Realtek RTL8139C
- Supports 10/100 Mb/s, Auto-negotiation
- Supports Wake-On-LAN function(S1, S3) ;selectable power delivery for S3,5
- 10baseT Connector mixed with USB style

3-1-8 Other Key Components

- USB HUB
- LPC SIO
- FWH (No Socket)

3-1-9 BIOS

Refer to Sony BIOS document released separately for further details.

- Award 6.0 or later based
- Flash ROM, Upgradable by user
- Sony customization (i.e Sony logo during boot up)

3-1-10 Power Management

- Suspend/Resume
  Supports S0, S1, S3, S4, S5
  Resume: Keyboard (programmable), Mouse (programmable), USB, LAN, and Power button)
  (Refer to Sony BIOS document)

- Power Delivery

	1394 PHY	USB (ICH&HUB&Port)	Keyboard Mouse	LAN
S3	Yes	Yes	Yes	Yes
S5	Yes	No	No	Yes

3-1-11 PS2 Keyboard/Mouse

- Keyboard/Mouse mixed signal (notebook style)

3-1-12 Floppy Drive Support

- 720K/1.2/1.44/2.88 MB diskette drive support

3-1-13 CD-ROM/DVD-ROM Drive Support

- Bootable CD support

3-1-14 IDE Drive Support

- 2 channel (4 devices) support through ICH
- Ultra DMA 66 support, cable detect method (host method)

3-1-15 Main Memory

- 2 x168pin DIMM sockets
- support PC133 unbuffered 64-bit SDRAM 3.3V DIMMS (single or double sided) below
- PC100 support
- Maximun support 256MB (512MB support not validated)

DIMM size	Configuration
8MB	1Mbit x 64
16MB	2Mbit x 64
32MB	4Mbit x 64
64MB	8Mbit x 64
128MB	16Mbit x 64
256MB	32Mbit x 64

3-1-16 Battery Requirements

- Type 2032, 3V coin battery with socket on motherboard
- Battery life greater than 3 years on motherboard (without AC power supply)

3-1-17 Reliability

- MTBF over xxxx [TBD]

3-1-18 Mother Board Environment Specification

Parameter	Specification	Note
Temperature Non-operatig	-40°C to +70°C	
Operating	0°C to +55°C	
Shock	[TBD]	
Vibration	[TBD]	

3-1-19 Power Supply/Consumption

The motherboard should meet the following power supply tolerance.
-5V supply is not used in this motherboard (-5V connect only the voltage monitor circuit)

DC Voltage	Acceptable Tolerance
+3.3V	±5%
+5V	±5%
+5V STB	±5%
+12V	±5%
-12V	±5%

When installed in micro ATX chassis with SFX power supply, Celeron466/66MHz, 64MB PC100 DIMM, 3.5-inch floppy drive, 10GB IDE hard drive, 4X IDE DVD-ROM drive, and PCI MODEM card, the following table is provided as a guide for power consumption.

Mode	AC(watts) out of 120VAC Outlet
Windows ME desktop	[TBD]
Windows ME desktop, sleep mode(S1)	< 25W
Windows ME desktop, sleep mode(S3)	< 5W

3-1-20 WHQL

The motherboard must pass WHQL certifications when installed with appropriate peripherals, OS and driver.

3-1-21 Label Requirements

The motherboard should have a reserved area for the label or print.

- product name
- revision
- serial number

3-1-22 Regulatory Compliance

The motherboard should be compliant with the following safety and EMI regulations when correctly installed in a micro ATX chassis.

3-1-22-1 Safety

Meet the following regulations.

3-1-22-1-1 UL

UL1950-CSA950-95
Resettable FUSE is requested for all I/O power lines

3-1-22-1-2 CSA

CSA C222 No.95-93

3-1-22-2 EMC

Meet the following regulations.

3-1-22-2-1 FCC Class B

3-1-22-2-2 VCCI Class B

3-2-1 Overview

This document describes the specification for the ***WMT-LX*** motherboard for PCV-RX370DS/RX380 DS

- MicroATX version1.0 compatible
- PGA423 socket, Pentium4 (Willamet) support.
- Intel 850 + ICH2 chipset
- AGP interface specification revision 2.0 compliance (support 2x/4x)
- AGP Card retention support
- Hardware monitoring FAN (CPU,PS) speed monitor/CPU Temp/sensor/Voltage monitor
- Four 184-pin RIMM sockets (RDRAM, maximum 1024Mbytes NonECC)
- PC800/PC600
- LPC I/F I/O Controller
- One AGP, Three PCI slots and NO ISA slot
- On board Ethernet
- Suspend to RAM support (Wake up from Keyboard, LAN, USB, Power button)
- Ultra DMA/100 enable (can support Host-side Detection)
- On board IEEE1394 OHCI
- Header for Front accessible IEEE1394 connector.
- Header for Front-accessible USB connector.
- Keyboard/Mouse mixed signal (Notebook style)
- On board AC97 2.0 Codec Audio
- Flash BIOS (Firmware Hub)
- No Q-salt capacitors
- PC99 Compliant
- PCI 2.2
- Heat sink grounding support for CPU

3-2-2 Form Factor

Meet Intel MicroATX version 1.0 specification

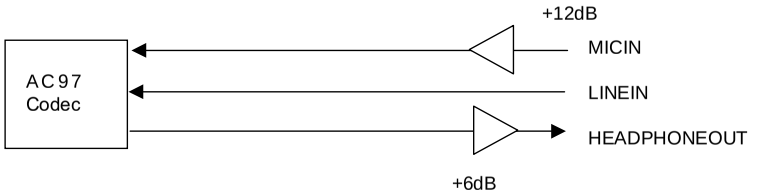
- maximum 9.6inches x 9.6 inches (244mmx244mm)
- height restrictions of MicroATX version 1.0

3-2-3 Connectors and Headers

- ATX power supply power connector with ATX12V, Power Supply Fan connector
- 1 FDD/2 IDE Connectors
- 4 184pin RIMM socket (gold plated)
- PGA423 socket
- 3 PCI slot and 1 AGP slot
- 4-pin CD-ROM audio input (stereo) connector
- 4-pin AUX audio input (stereo) connector
- 4-pin Video input (stereo) connector
- One IEEE1394 (6pin) standard interface connector, two headers
- 4 USB port connector (2 for rear I/O, 2 with header for Front accessible area)
- Power/Sleep/HDD/LED2/Reset/Speaker header (Front Panel I/O header)
- 1 Parallel (25pin) connector
- 1 Serial (COM1, 9pin) connector in rear I/O
- 2 PS2 connector (Keyboard, Mouse)
- 1 MIDI/Game connector
- SOFA (Paddle) connector
- Line In/Mic In/Headphone Out mini-jack
- 1Cooling Fan connector (CPU)
- Clear CMOS header (for BIOS)
- CPU Clock select (optional)
- Thermal measurement header
- Ethernet Connector

3-2-4 Audio

- AC97 codec
- Circuit for utilizing soft audio required
- external +12dB boost add for MIC IN input (Single Powered OP-amp required)
- +6dB boost with power amplifier add for HEADPHONE OUT (LM4880 or equivalent)
- Audio Quality meet PC99 specs (TENTATIVE)
  D to A SNR +85dB, THD +65dB FSA
  A to D SNR +80dB, THD +60dB FSA
  A to A SNR +85dB, THD +55dB FSA (LINE IN to LINE OUT, 1kHz sine wave, 0dB=1 Vrms)
  MIC SNR +75dB (-12kHz)
- EMI filters (or equivalent consideration) on HEADPHONE OUT/LINE IN/GAME PORT for FCC/ VCCI
- Pop noise cancel function.
- Audio enable/disable control circuit and controlled by the BIOS.



	Specs (tentative)	Notes
Line In	1Vrms (typ) 2Vrms (max)	10k ohm impedance
Headphoneout (line out)	1.5 Vrms (max)	32 ohm load (drive headphone)
	2 Vrms (max)	10k ohm load
Mic In	0.1 Vrms (max)	Codec Boost Off

3-2-5 AGP Graphics

- 2x/4x AGP interface
- use the universal connector
- Support the retention module
- AGP Interface Specification Rev 2.0 (From Intel)
- AGP Card Retention Specification rev 1.0 (From Intel)

3-2-6 IEEE 1394 OHCI

- Texas Instrument TSB41AB3 PHY (physical layer)
- Texas Instrument TSB12LV26 LINK (link layer)
- Power provide +12V, 5W/port
- EMI filters (TOKO 857CM-009) on the IEEE1394 Front access header/Rear access option hea der/Rear connector for FCC/VCCI
- IEEE1394 enable/disable control circuits and controlled by the BIOS.

- PHY power provided by the 3VSB_DUAL (S5) and maximum current is 200mA.

3-2-7 LAN

- Realtec RTL8139C
- Supports 10/100 Mb/s, Auto-negotiation
- Supports Wake-On-LAN function (S1, S3) ; selectable power delivery for S3, 5
- 10baseT Connector mixed with USB style

3-2-8 Other Key Components

- LPC SIO
- FWH (No Socket)

3-2-9 BIOS

Refer to Sony BIOS document released separately for further details.

- Award 6.0 or later based
- Flash ROM, Upgradable by user
- Sony customization (i.e Sony logo during boot up)

3-2-10 Power Management

- Suspend/Resume
  Supports S0, S1, S3, S4, S5
  Resume: Keyboard (programmable) , Mouse (programmable) , USB, LAN, and Power button)
  (Refer to Sony BIOS document)

- Power Delivery

	1394 PHY	USB (ICH&HUB&Port)	Keyboard Mouse	LAN
S3	Yes	Yes	Yes	Yes
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- Bootable CD support

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- 2 channel (4 devices) support through ICH
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3-2-15 Main Memory

- 4 x184pin RIMM sockets
- support PC800 unbuffered 64-bit SDRAM 3.3V DIMMS (single or double sided) below
- Maximun support 256MB (512MB support not validated)

RIMM size	Configuration
64MB	
128MB	
256MB	
512MB	

3-2-16 Battery Requirements

- Type 2032, 3V coin battery with socket on motherboard
- Battery life greater than 3 years on motherboard (without AC power supply)

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The motherboard must pass WHQL certifications when installed with appropriate peripherals , OS and driver.

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- revision
- serial number

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Meet the following regulations.

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UL1950-CSA950-95
Resettable FUSE is requested for all I/O power lines

3-2-22-1-2 CSA

CSA C222 No.95-93

3-2-22-2 EMC

Meet the following regulations.

3-2-22-2-1 FCC Class B

3-2-22-2-2 VCCI Class B

SECTION 4
PROGRAM FOR SERVICE

4-1. General

The Diagnostic Programs for Service are available with the following three kinds.

1. PC-Doctor

This can test the Mother Board, CPU, Memory, FDD, HDD, and CD/DVD-ROM.

It is used for the PCV-RX51/RX61K/RX71K (J models) and PCV-RX360DS/RX370DS/RX380DS (US models).

2. Intel 815 Video Diag

This can test the VGA (815 Chipset built in).
It is used for the PCV-RX51 (J model) and PCV-RX360DS (US model).

3. nVIDIA Video Diag

There are two types of diagnostic programs, one for the 16M memory Geforce used in the PCV-RX61K (J model)/RX370DS (US model), and the other for the 13M memory Geforce used in PCV-RX71K (J model)/RX380DS (US model).

4-2. PC-Doctor Starting Method

As the Diag. disc is a bootable CD, set the CD in the CD/DVD-ROM drive and turn the system power on.
The menu will be displayed, then select the following:
1. PC-Doctor for PCV-RX51/RX61K/RX71K/RX360DS/RX370DS/RX380DS
After the system started, set a DOS formatted 1.44M floppy disk without the write protection in the FDD, and the CD-ROM Disc in the CD-RW drive, select the model to be tested following the menu.
All tests are carried out automatically.
Do not remove the Diag. disc during the test.

4-2-1. Test Items

CPU/COPROCESSOR TEST
The CPU/Coprocessor are tested.

MEMORY TEST
The memory is tested.
The bus throughput of the extended memory cannot be tested, and therefore N/A is displayed as the test result, but this is not a fault.

SYSTEM BOARD TEST
The Mother Board is tested.
Also, the keyboard and mouse are tested, thus requiring the keyboard and mouse to be connected to the set in advance.

SERIAL PORT TEST
The COM port is tested.

PARALLEL PORT TEST
The printer port is tested.

VIDEO ADAPTER TEST
The video card is tested.
Only the DOS legacy mode is tested.

FIXED DISK TEST
HDD is tested.

DISKETTE TEST
FDD is tested.
As the read/write operation is performed to the floppy disk, set the DOS formatted 1.44M disk without the write protection before the PC-Doctor is started. Also, if the PC-Doctor is booted from the CD, the boot image of CD is treated as the floppy 0 (drive A), and accordingly the FDD is treated as the floppy 1 (drive B).
In this case, the floppy 0 cannot be tested and N/A is displayed as the test result, but this is not a fault.

MISCELLANEOUS TEST
Other devices are tested.
CD/DVD-ROM read check, CPU type check, and configuration check of PCI device, etc. are executed.

4-2-2. Test Result

After the test finished, “PASSED” or “FAILED” is displayed.
In case of “FAILED” display, press the F1 key to display the log and then, check the faulty item.
Certain items cannot be tested and N/A is displayed, but this is not a fault.

Example of log file
```
PC-DOCTOR 2.0 SYSTEM TEST LOG
================================
Inventory.....................
  CPU MHz is too low (700 vs 750)
Inventory              FAILED
```

4-3. Intel 815 Video Diag Starting Method

As the Diag. disc is a bootable CD, set the CD in the CD/DVD-ROM drive and turn the system power on.
The menu will be displayed, then select the following:
2. Intel 815 Video Diag for PCV-RX51/RX360DS
After the system started, the file is automatically expanded on the RAM disk and the test starts.

4-3-1. Test Result

After the test finished, “PASS” or “FAIL” is displayed.
The contents of RAM disk are cleared when the power is turned off.

4-4. nVIDIA Geforce Video Diag Starting Method (For PCV-RX370DS)

As the Diag. disc is a bootable CD, set the CD in the CD/DVD-ROM drive and turn the system power on.
The menu will be displayed, then select the following:
3. nVIDIA Geforce 16M Diag for PCV-RX61K/RX370DS
After the system started, the file is automatically expanded on the RAM disk and the test starts.

4-4-1. Test Result

After the test finished, “PASS” or “FAIL” is displayed.
The contents of RAM disk are cleared when the power is turned off.

4-5. nVIDIA Geforce Video Diag Starting Method (For PCV-RX380DS)

As the Diag. disc is a bootable CD, set the CD in the CD/DVD-ROM drive and turn the system power on.
The menu will be displayed, then select the following:
4. nVIDIA Geforce 32M Diag for PCV-RX71K/RX380DS
After the system started, the file is automatically expanded on the RAM disk and the test starts.

4-5-1. Test Result

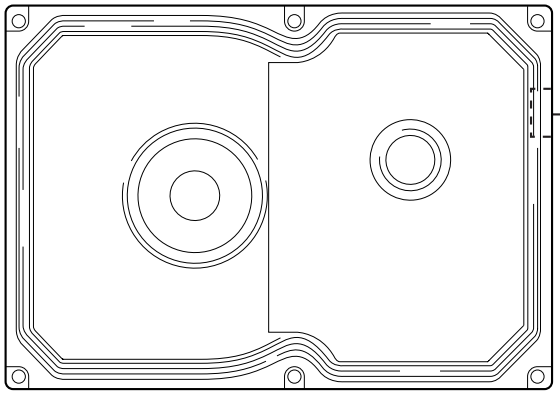
After the test finished, “PASS” or “FAIL” is displayed.
The contents of RAM disk are cleared when the power is turned off.

SECTION 5
SERVICE INFORMATION

5-1. JUMPER SETTING ON HARD DISK DRIVE

The hard disk drive of service parts can be used without changing factory jumper setting, when it was replaced for service.

Model	Part No.	Maker	Code	Capacity (formatted)
PCV-RX380DS	1-796-089-11	Maxtor	98196H8	80 GB



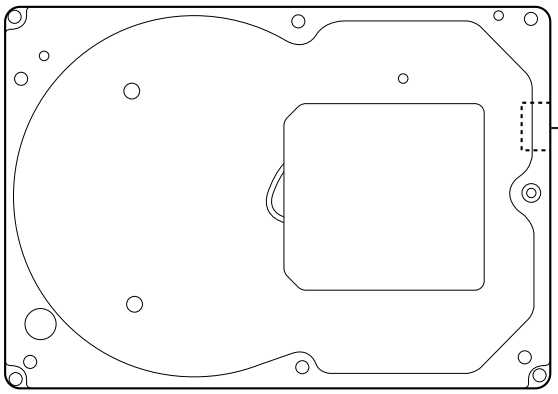
Master/Slave selection Jumper setting

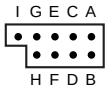
J42 Factory Reserved
J44 Factory Reserved
J46 4092 Cylinder Limitation
J48 Cable Select
J50 Master/Slave

Configuration Jumper Settings

	Only drive in signal drive system ← *Factory setting*
	Master drive in dual drive system
	Slave drive in dual drive system

Model	Part No.	Maker	Code	Capacity (formatted)
PCV-RX370DS	1-796-090-11	IBM	DTLA-305060	60 GB

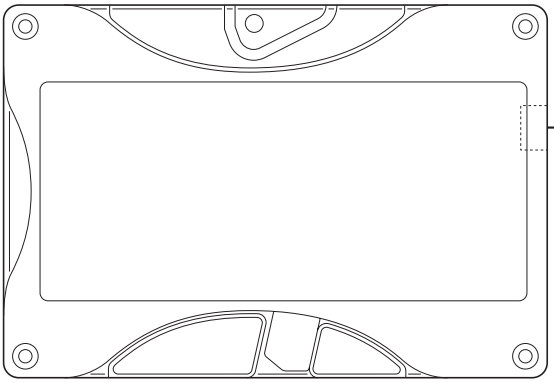




Master/Slave selection
Jumper setting

	DEVICE 0 (MASTER) ← Factory setting
	DEVICE 1 (SLAVE)
	CABLE SELECT
	FORCING DEV 1 PRESENT

Model	Part No.	Maker	Code	Capacity (formatted)
PCV-RX360DS	1-772-938-12	Seagate	ST340823A	40 GB



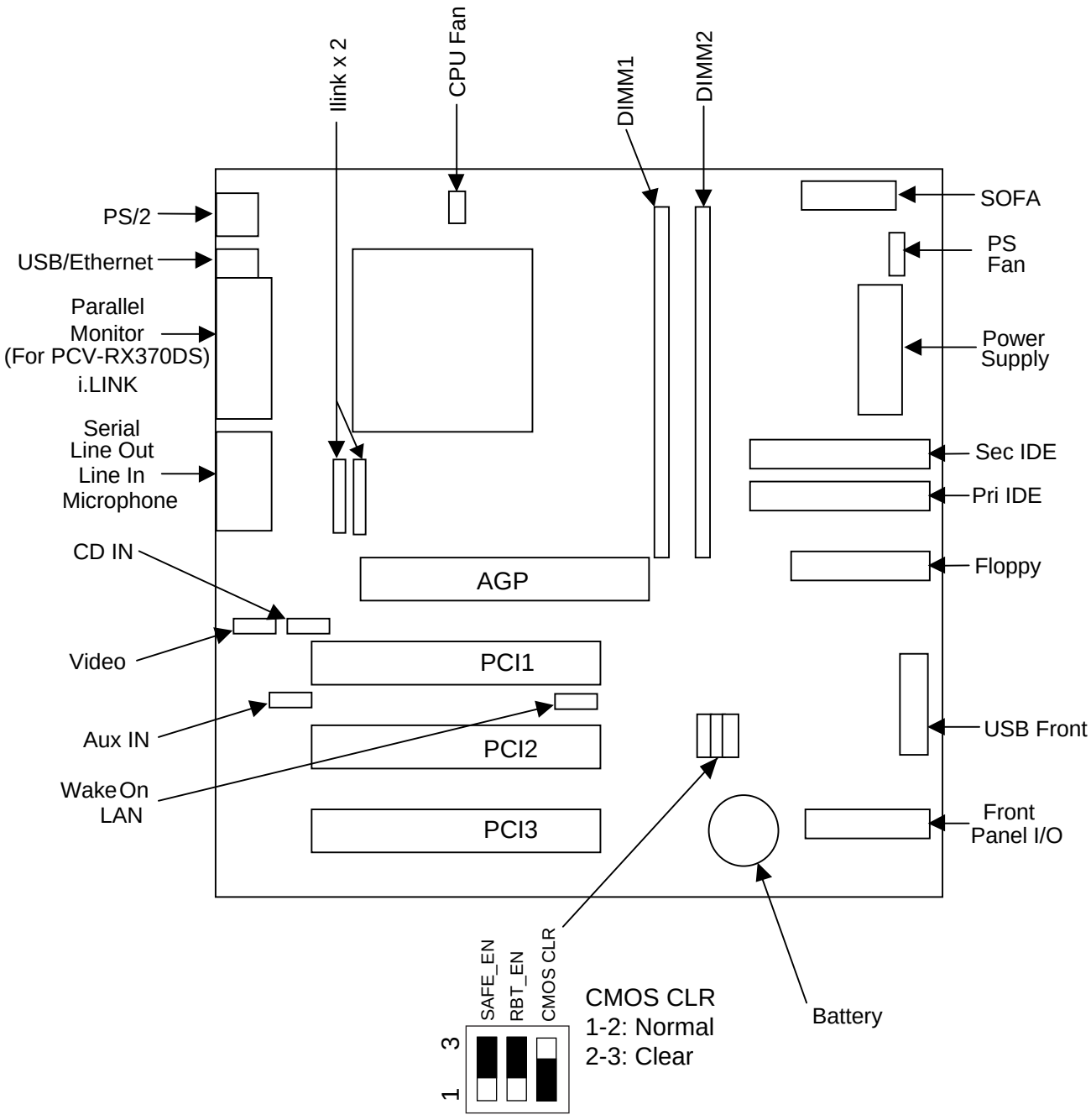
Master/Slave selection Jumper setting

	Master or single drive ← *Factory setting*
	Drive is a slave
	Master with a non-ATA compatible slave
	Enable cable select

5-2. JUMPER SETTING OF MOTHER BOARD

The Mother board of service parts can be used without changing factory jumper setting, when it was replaced for service.

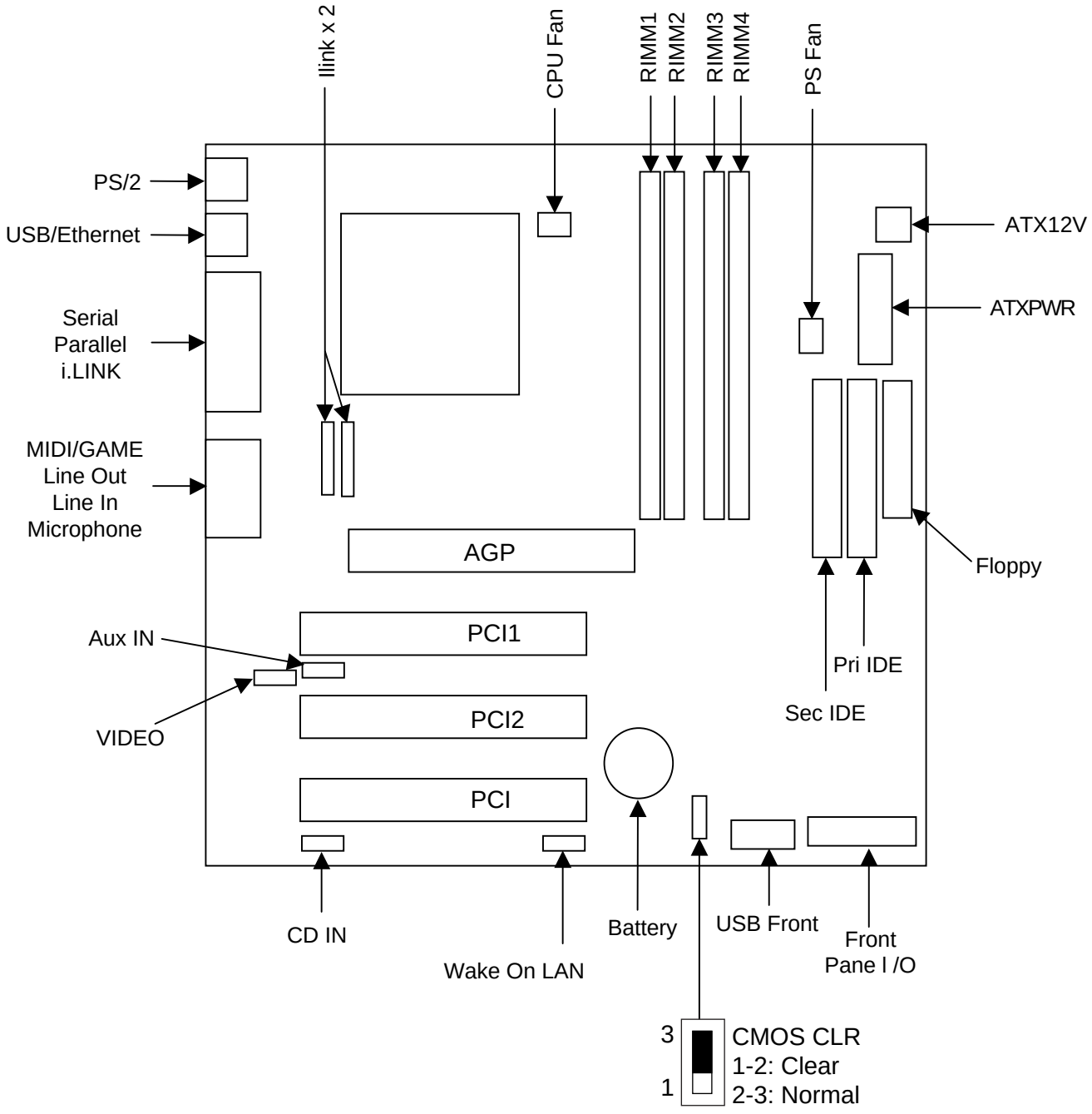
(for PCV-RX360DS)



⚠ CAUTION

Do not change the jumper with the power turned on.
Before changing the jumper, turn off the power and disconnect the power cord from the set.

(for PCV-RX370DS/RX380DS)



SECTION 6
FRAME HARNESS

6-1. CONNECTOR LIST
1. CUSL-LV MOTHER BOARD (for PCV-RX360DS)

1-1 Internal connector

Power supply

20pin ATX type connector.

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	+3.3 V
2	+3.3 V
3	Ground
4	+5 V
5	Ground
6	+5 V
7	Ground
8	PWRGD (Power Good)
9	+5 VSB
10	+12 V
11	+3.3 V
12	-12 V
13	Ground
14	PS-ON# (power supply remote on/off control)
15	Ground
16	Ground
17	Ground
18	No Connection
19	+5 V
20	+5 V

PS FAN

Support FAN control of power supply.

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Ground
2	FAN_CTRL (0V(S3) , 2V(S1), 12 V(S0))
3	FAN_SEN

The FAN_CTRL line is controlled by the BIOS and this line is voltage control line

IDE Primary/Secondary

For 3.5" Hard Drive, 40 pin Header (2.54mm standard type)

Connector location on MB	See the frame harness diagram

Host side detect Cable Type Using GPIOs

FLOPPY

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name	Pin	Signal Name
1	Ground	2	HDsel
3	Ground	4	N.C.
5	Ground	6	DRIVE_SELECT_#3
7	Ground	8	INDEX
9	Ground	10	DRIVE_SELECT_#0
11	Ground	12	DRIVE_SELECT_#1
13	Ground	14	DRIVE_SELECT_#2
15	Ground	16	N.C.
17	Ground	18	DIRECTION#
19	Ground	20	STEP#
21	Ground	22	WRITE_DATA#
23	Ground	24	WRITE_GATE#
25	Ground	26	TRACK_00#
27	Ground	28	WRITE_PROTECT#
29	N.C.	30	READ_DATA#
31	Ground	32	SIDE_1_SELECT#
33	N.C.	34	DSKCHG#

--NOTE--
'HDsel' signal is sent form drive. It indicate 2HD(when High) or 2DD(when Low) media. 'MODE_SELECT#' is control signal of disk rotation speed. When this signal is High, Media rotates 300RPM (2MB). When Low, media rotates 360RPM(1.6MB).

168pin DIMM socket x2

2 slot DIMM connector, 3.3V Unbuffered SDRAM

Connector location on MB	See the frame harness diagram

PGA370 socket

Coppermine-128k, Coppermine-256K supported

Connector location on MB	See the frame harness diagram

PCI Slot x3

Single Edge Contact PCI slot.

Connector location on MB	See the frame harness diagram

-12V	B1	A1	TRST#	AD[17]	B32	A32	AD[16]
TCK	B2	A2	+12V	C/BE[2]#	B33	A33	+3.3V
Ground	B3	A3	TMS	Ground	B34	A34	FRAME#
TDO	B4	A4	TDI	IRDY#	B35	A35	Ground
+5V	B5	A5	+5V	+3.3V	B36	A36	TRDY#
+5V	B6	A6	INTA#	DEVSEL#	B37	A37	Ground
INTB#	B7	A7	INTC#	Ground	B38	A38	STOP#
INTD#	B8	A8	+5V	LOCK#	B39	A39	+3.3V
PRSNT1#	B9	A9	Reserved	PERR#	B40	A40	Reserved
Reserved	B10	A10	+5V	+3.3V	B41	A41	Reserved
PRSNT2#	B11	A11	*Reserved	SERR#	B42	A42	Ground
Ground	B12	A12	Ground	+3.3V	B43	A43	PAR
Ground	B13	A13	Ground	C/BE[1]#	B44	A44	AD[15]
Reserved	B14	A14	Reserved	AD[14]	B45	A45	+3.3V
Ground	B15	A15	RST#	Ground	B46	A46	AD[13]
CLK	B16	A16	+5V	AD[12]	B47	A47	AD[11]
Ground	B17	A17	GNT#	AD[10]	B48	A48	Ground
REQ#	B18	A18	Ground	Ground	B49	A49	AD[09]
+5V	B19	A19	Reserved	Key	B50	A50	Key
AD[31]	B20	A20	AD[30]	Key	B51	A51	Key
AD[29]	B21	A21	+3.3V	AD[08]	B52	A52	C/BE[0]#
Ground	B22	A22	AD[28]	AD[07]	B53	A53	+3.3V
AD[27]	B23	A23	AD[26]	+3.3V	B54	A54	AD[06]
AD[25]	B24	A24	Ground	AD[05]	B55	A55	AD[04]
+3.3V	B25	A25	AD[24]	AD[03]	B56	A56	Ground
C/BE[3]#	B26	A26	IDSEL	Ground	B57	A57	AD[02]
AD[23]	B27	A27	+3.3V	AD[01]	B58	A58	AD[00]
Ground	B28	A28	AD[22]	+5V	B59	A59	+5V
AD[21]	B29	A29	AD[20]	ACK64#	B60	A60	REQ64#
AD[19]	B30	A30	Ground	+5V	B61	A61	+5V
+3.3V	B31	A31	AD[18]	+5V	B62	A62	+5V

PCI #3 slot has special connection at A11 pin.
The serial IRQ signal connects to the A11 pin on the PCI #3.

AGP Slot (not installed*)

Single Edge Contact AGP slot. Universal AGP connector

Connector location on MB	See the frame harness diagram

CPU FAN

Supports CPU cooling fan of 500mA or less. Voltage = 12V

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Ground
2	FAN_CTRL (+12 V)
3	FAN_SEN

CD IN

4 pin standard 2mm single line header for CD Audio signal input

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Left Line In
2	Ground
3	Ground
4	Right Line In

* Connectors mentioned (not installed) are not used even they are mounted on MB

AUX IN (not installed*)

4 pin standard 2mm single line header for AUX Audio signal input

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Left Line In
2	Ground
3	Ground
4	Right Line In

Video (not installed*)

4 pin standard 2mm single line header for Video Audio signal input

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Video_L
2	Ground
3	Ground
4	Video_R

SPDIFOUT (not installed*)

3 pin standard 2mm single line header for S/P DIFoutput

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	VCC
2	AU_DATA(GPIO[2])
3	Ground

IEEE1394 header x2

8 pin standard 2.5 mm single line header for IEEE1394 Front connector.

IEEE1394 Front access header

Connector location on MB	Refered as 1394HEAD3 See the frame harness diagram

IEEE1394 Optional header (not installed*)

Connector location on MB	Refered as 1394HEAD2 See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Shell Ground
2	Ground
3	TPA
4	TPA*
5	TPB
6	TPB*
7	Ground
8	VP (Power)

VP line need over current protector. Raychem SMD150/33-2 or equivalent is used for that.

USB FRONT

12 pin standard 2.5mm Dual line Box header for Front USB connector.

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name	Pin	Signal Name
1	+3V_Dual	2	NP1#
3	NP3#	4	NC (Key)
5	USB VCC1	6	USB VCC2
7	LP2+	8	LP3+
9	LP2-	10	LP3-
11	Ground	12	Ground

USBVCC2 line needs the over current protector.
Raychem miniSMDC110-2 or equivalent is used for that.

FRONT PANEL I/O

20 pin standard 2.5mm dual line header for LED/Switch unit

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name	Pin	Signal Name
1	PWR_BTN	11	MSG_LED+
2	PWR_BTN_G	12	MSG_LED-
3	IDELED-	13	KEYLOCK
4	IDELED+	14	KEYLOCK_G
5	KEY	15	SMI
6	PWR_LEDL+	16	SMI_G
7	PWR_LED-	17	+5V
8	PWR_LEDB+	18	HD_LED2-
9	RESET	19	Ground
10	RESET G (GND)	20	SPKR

Battery Holder & Battery

Holder vender	LOTES B6615BP5L or equivalent
Holder location on MB	See the frame harness diagram
Battery vender	Sony CR2032 or equivalent

SOFA header (not installed*)

This SOFA header is not same one Callisto has.

Pin assignments:

Pin	Signal Name	Pin	Signal Name
1	PWRBTN#	2	GND
3	SYS_ON	4	GND
5	TXD2	6	GND
7	RXD2	8	GND
9	CTS#	10	GND
11	RTS#	12	GND
13	+5VSB	14	+5VSB
15	+5VSB	16	+5V
17	+5V	18	+5V
19	NC	20	+12V

(Note) PWRBTN#: control M/B power on/off.
SYS_ON: control M/B reset signal and secondary IDE reset signal.
TxD2, RxD2, and CTS2: shared with COM2 Optional header

1-2 External connector

Parallel

Connector location on MB	Rear side, see the frame harness diagram

Pin assignments:

Pin	Signal Name	Pin	Signal Name
1	Strobe#	14	Auto Feed#
2	Data bit 0	15	Fault#
3	Data bit 1	16	INIT#
4	Data bit 2	17	SLCT IN#
5	Data bit 3	18	Ground
6	Data bit 4	19	Ground
7	Data bit 5	20	Ground
8	Data bit 6	21	Ground
9	Data bit 7	22	Ground
10	ACK#	23	Ground
11	Busy	24	Ground
12	Error	25	Ground
13	Select		

* Connectors mentioned (not installed) are not used even they are mounted on MB

COM/Line Out/Line In/Microphone

Connector location on MB	Rear side, see the frame harness diagram

Pin assignments:

Pin	Signal Name
1	DCD
2	Serial In #
3	Serial Out #
4	DTR#
5	Ground
6	DSR
7	RTS
8	CTS
9	RI1#

COM1, COM2 RI# output connected to ICH input for Wake up event

IEEE1394 Rear connector

6 pin standard IEEE1394 Rear connector.

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	VP (Power)
2	Ground
3	TPB*
4	TPB
5	TPA*
6	TPA

VP line need over current protector.
Raychem SMD150/33-2 or equivalent is used for that.

PS2 Keyboard/Mouse

Connector location on MB	Rear side, see the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Keyboard Data
2	Mouse Data
3	Ground
4	PS2VCC
5	Keyboard Clock
6	Mouse Clock
7	Mouse Data
8	N.C.
9	Ground
10	PS2VCC
11	N.C.
12	Mouse Clock

PS2VCC line needs the over current protector. Raychem miniSMDC110-2 or equivalent is used for that.

USB/LAN

Two USB connector for external USB devices. (Support the stacked connector)
One 10/100Base-T connector

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	USBVCC1
2	USBP0#
3	USBP0
4	Ground
5	USBVCC2
6	USBP1#
7	USBP1
8	Ground
9	
10	
11	
12	
13	
14	
15	
16	

USBVCC1/USBVCC2 lines need the over current protector.
Raychem miniSMDC110-2 or equivalent is used for that.

VGA

Connector location on MB	Rear side, see the frame harness diagram

Game port pin assignments:

Pin	Signal Name
1	RED
2	GREEN
3	BLUE
4	NC
5	GND
6	GND
7	GND
8	Reserved
9	Reserved
10	GND
11	NC
12	DDCDAT
13	HSYNC
14	VSYNC
15	DDCCLK

Line Out pin assignments:

Pin	Signal Name
Sleeve	Ground
Tip	Audio Left Out
Ring	Audio Right Out

Line In pin assignments:

Pin	Signal Name
Sleeve	Ground
Tip	Audio Left In
Ring	Audio Right In

Microphone In pin assignments:

Pin	Signal Name
Sleeve	Ground
Tip	Microphone mono In
Ring	Electret Bias Voltage

1-3 Jumper Header

CPU Clock select

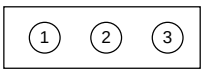
Jumper Header manual configuration is used only for debug.
Production should be auto-sense configuration. PCB should be able to support automatic and manual configuration by minimal mount options.
Select CPU's External frequency (BUS frequency) and BUS Frequency Multiplier and Memory Frequency. (Acceptable for BIOS setting instead of Jumper Header)

CMOS Clear/Reboot En/Safe En

Clear the RTC data

Connector location on MB	See the frame harness diagram

Jumper header



Combination of jumper caps:

	CMOSCLR	RBT_EN	SAFE_EN
1-2	Normal	Reboot Disabled	Safe Mode Enabled
2-3	Clear	Normal	Normal

Reboot Enable:
If set to 1-2, disables reboot function
Safe Enable:
If set to 1-2, CPU speed will be set to safe mode

Those two headers are for factory testing purpose only DO NOT CHANGE

2. WMT-LX MOTHER BOARD (for PCV-RX370DS/RX380DS)

1-1 Internal connector

ATXPWR

20pin ATX type connector.

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	+3.3 V
2	+3.3 V
3	Ground
4	+5 V
5	Ground
6	+5 V
7	Ground
8	PWRGD (Power Good)
9	+5 VSB
10	+12 V
11	+3.3 V
12	-12 V
13	Ground
14	PS-ON# (power supply remote on/off control)
15	Ground
16	Ground
17	Ground
18	No Connection
19	+5 V
20	+5 V

4pin ATX12V type connector.

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Ground
2	Ground
3	+12V
4	+12V

PS FAN

Support FAN control of power supply.

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Ground
2	FAN_CTRL (0V(S3) , 2V(S1), 12 V(S0))
3	FAN_SEN

The FAN_CTRL line is controlled by the BIOS and this line is voltage control line

IDE Primary / Secondary

For 3.5" Hard Drive, 40 pin Header (2.54mm standard type)

Connector location on MB	See the frame harness diagram

Host side detect Cable Type Using GPIOs

FLOPPY

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name	Pin	Signal Name
1	Ground	2	HDsel
3	Ground	4	N.C.
5	Ground	6	DRIVE_SELECT_#3
7	Ground	8	INDEX
9	Ground	10	DRIVE_SELECT_#0
11	Ground	12	DRIVE_SELECT_#1
13	Ground	14	DRIVE_SELECT_#2
15	Ground	16	N.C.
17	Ground	18	DIRECTION#
19	Ground	20	STEP#
21	Ground	22	WRITE_DATA#
23	Ground	24	WRITE_GATE#
25	Ground	26	TRACK_00#
27	Ground	28	WRITE_PROTECT#
29	N.C.	30	READ_DATA#
31	Ground	32	SIDE_1_SELECT#
33	N.C.	34	DSKCHG#

--NOTE--

'HDsel' signal is sent form drive. It indicate 2HD(when High) or 2DD(when Low) media.
'MODE_SELECT#' is control signal of disk rotation speed. When this signal is High, Media rotates 300RPM (2MB). When Low, media rotates 360RPM(1.6MB).

184pin RIMM socket x4

4 slot RIMM connector, 2.5V Unbuffered RDRAMM

Connector location on MB	See the frame harness diagram

PGA423 socket

Pentium4 supported

Connector location on MB	See the frame harness diagram

PCI Slot x3

Single Edge Contact PCI slot.

Connector location on MB	See the frame harness diagram

-12V	B1	A1	TRST#	AD[17]	B32	A32	AD[16]
TCK	B2	A2	+12V	C/BE[2]#	B33	A33	+3.3V
Ground	B3	A3	TMS	Ground	B34	A34	FRAME#
TDO	B4	A4	TDI	IRDY#	B35	A35	Ground
+5V	B5	A5	+5V	+3.3V	B36	A36	TRDY#
+5V	B6	A6	INTA#	DEVSEL#	B37	A37	Ground
INTB#	B7	A7	INTC#	Ground	B38	A38	STOP#
INTD#	B8	A8	+5V	LOCK#	B39	A39	+3.3V
PRSNT1#	B9	A9	Reserved	PERR#	B40	A40	Reserved
Reserved	B10	A10	+5V	+3.3V	B41	A41	Reserved
PRSNT2#	B11	A11	*Reserved	SERR#	B42	A42	Ground
Ground	B12	A12	Ground	+3.3V	B43	A43	PAR
Ground	B13	A13	Ground	C/BE[1]#	B44	A44	AD[15]
Reserved	B14	A14	Reserved	AD[14]	B45	A45	+3.3V
Ground	B15	A15	RST#	Ground	B46	A46	AD[13]
CLK	B16	A16	+5V	AD[12]	B47	A47	AD[11]
Ground	B17	A17	GNT#	AD[10]	B48	A48	Ground
REQ#	B18	A18	Ground	Ground	B49	A49	AD[09]
+5V	B19	A19	Reserved	Key	B50	A50	Key
AD[31]	B20	A20	AD[30]	Key	B51	A51	Key
AD[29]	B21	A21	+3.3V	AD[08]	B52	A52	C/BE[0]#
Ground	B22	A22	AD[28]	AD[07]	B53	A53	+3.3V
AD[27]	B23	A23	AD[26]	+3.3V	B54	A54	AD[06]
AD[25]	B24	A24	Ground	AD[05]	B55	A55	AD[04]
+3.3V	B25	A25	AD[24]	AD[03]	B56	A56	Ground
C/BE[3]#	B26	A26	IDSEL	Ground	B57	A57	AD[02]
AD[23]	B27	A27	+3.3V	AD[01]	B58	A58	AD[00]
Ground	B28	A28	AD[22]	+5V	B59	A59	+5V
AD[21]	B29	A29	AD[20]	ACK64#	B60	A60	REQ64#
AD[19]	B30	A30	Ground	+5V	B61	A61	+5V
+3.3V	B31	A31	AD[18]	+5V	B62	A62	+5V

PCI #3 slot has special connection at A11 pin.
The serial IRQ signal connects to the A11 pin on the PCI #3.

AGP Slot

Single Edge Contact AGP slot. Universal AGP connector

Connector location on MB	See the frame harness diagram

CPU FAN

Supports CPU cooling fan of 500mA or less. Voltage = 12V

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Ground
2	FAN_CTRL (+12 V)
3	FAN_SEN

CD IN

4 pin standard 2mm single line header for CD Audio signal input

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Left Line In
2	Ground
3	Ground
4	Right Line In

AUX IN (not installed*)

4 pin standard 2mm single line header for AUX Audio signal input

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Left Line In
2	Ground
3	Ground
4	Right Line In

Video (not installed*)

4 pin standard 2mm single line header for Video Audio signal input

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Video_L
2	Ground
3	Ground
4	Video_R

IEEE1394 header x2

8 pin standard 2.5 mm single line header for IEEE1394 Front connector.

IEEE1394 Front access header

Connector location on MB	Refered as 1394HEAD3 See the frame harness diagram

IEEE1394 Optional header (not installed*)

Connector location on MB	Refered as 1394HEAD2 See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Shell Ground
2	Ground
3	TPA
4	TPA*
5	TPB
6	TPB*
7	Ground
8	VP (Power)

VP line need over current protector. Raychem SMD150/33-2 or equivalent is used for that.

USB Front

12 pin standard 2.5mm Dual line Box header for Front USB connector.

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name	Pin	Signal Name
1	+3V_Dual	2	NP1#
3	NP3#	4	NC (Key)
5	USB VCC1	6	USB VCC2
7	LP2+	8	LP3+
9	LP2-	10	LP3-
11	Ground	12	Ground

USBVCC2 line needs the over current protector.

Raychem miniSMDC110-2 or equivalent is used for that.

FRONT PANEL I/O

20 pin standard 2.5mm dual line header for LED/Switch unit

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name	Pin	Signal Name
1	PWR_BTN	11	MSG_LED+
2	PWR_BTN_G	12	MSG_LED-
3	IDELED-	13	KEYLOCK
4	IDELED+	14	KEYLOCK_G
5	KEY	15	SMI
6	PWR_LEDL+	16	SMI_G
7	PWR_LED-	17	+5V
8	PWR_LEDB+	18	HD_LED2-
9	RESET	19	Ground
10	RESET G (GND)	20	SPKR

Battery Holder & Battery

Holder vender	LOTES B6615BP5L or equivalent
Holder location on MB	See the frame harness diagram
Battery vender	Sony CR2032 or equivalent

1-2 External connector

Parallel

Connector location on MB	Rear side, See the frame harness diagram

Pin assignments:

Pin	Signal Name	Pin	Signal Name
1	Strobe#	14	Auto Feed#
2	Data bit 0	15	Fault#
3	Data bit 1	16	INIT#
4	Data bit 2	17	SLCT IN#
5	Data bit 3	18	Ground
6	Data bit 4	19	Ground
7	Data bit 5	20	Ground
8	Data bit 6	21	Ground
9	Data bit 7	22	Ground
10	ACK#	23	Ground
11	Busy	24	Ground
12	Error	25	Ground
13	Select		

* Connectors mentioned (not installed) are not used even they are mounted on MB

IEEE1394 Rear connector

6 pin standard IEEE1394 Rear connector.

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	VP (Power)
2	Ground
3	TPB*
4	TPB
5	TPA*
6	TPA

VP line need over current protector.

Raychem SMD150/33-2 or equivalent is used for that.

PS2 Keyboard /Mouse

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	Keyboard Data
2	Mouse Data
3	Ground
4	PS2VCC
5	Keyboard Clock
6	Mouse Clock
7	Mouse Data
8	N.C.
9	Ground
10	PS2VCC
11	N.C.
12	Mouse Clock

PS2VCC line needs the over current protector. Raychem miniSMDC110-2 or equivalent is used for that.

USB/LAN

Two USB connector for external USB devices. (Support the stacked connector)

One 10/100Base-T connector

Connector location on MB	See the frame harness diagram

Pin assignments:

Pin	Signal Name
1	USBVCC1
2	USBP0#
3	USBP0
4	Ground
5	USBVCC2
6	USBP1#
7	USBP1
8	Ground
9	
10	
11	
12	
13	
14	
15	
16	

USBVCC1/USBVCC2 lines need the over current protector.

Raychem miniSMDC110-2 or equivalent is used for that.

Game/Line Out/Line In/Microphone Jack

Connector location on MB	Rear side, See the frame harness diagram

Game port pin assignments:

Pin	Signal Name
1	GAMEVCC
2	JPYB0
3	JOYA0
4	GND
5	GND
6	JOYA1
7	JOYB1
8	GAMEVCC
9	GAMEVCC
10	JOYB2
11	JOYA2
12	MIDI_TxD
13	JOYA3
14	JOYB3
15	MIDI_RxD

Line Out pin assignments:

Pin	Signal Name
Sleeve	Ground
Tip	Audio Left Out
Ring	Audio Right Out

Line In pin assignments:

Pin	Signal Name
Sleeve	Ground
Tip	Audio Left In
Ring	Audio Right In

Microphone In pin assignments:

Pin	Signal Name
Sleeve	Ground
Tip	Microphone mono In
Ring	Electret Bias Voltage

GAMEVCC line need the over current protector.

Raychem miniSMDC110-2 or equivalent is used for that.

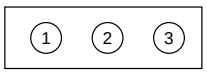
1-3 Jumper Header

CMOS Clear

Clear the RTC data

Connector location on MB	See the frame harness diagram

Jumper header

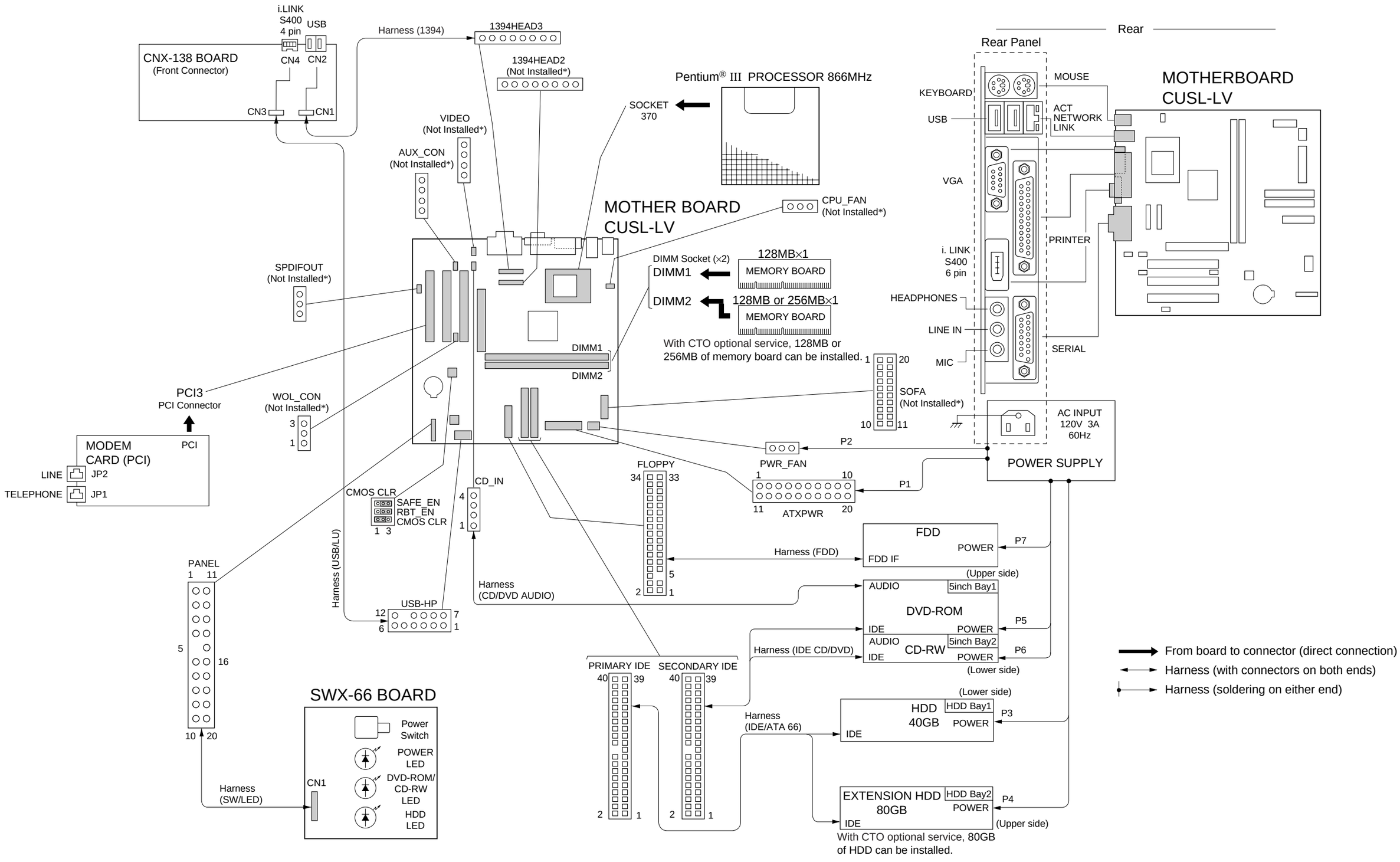


Combination of jumper caps:

	CMOSCLR
1-2	Clear
2-3	Normal

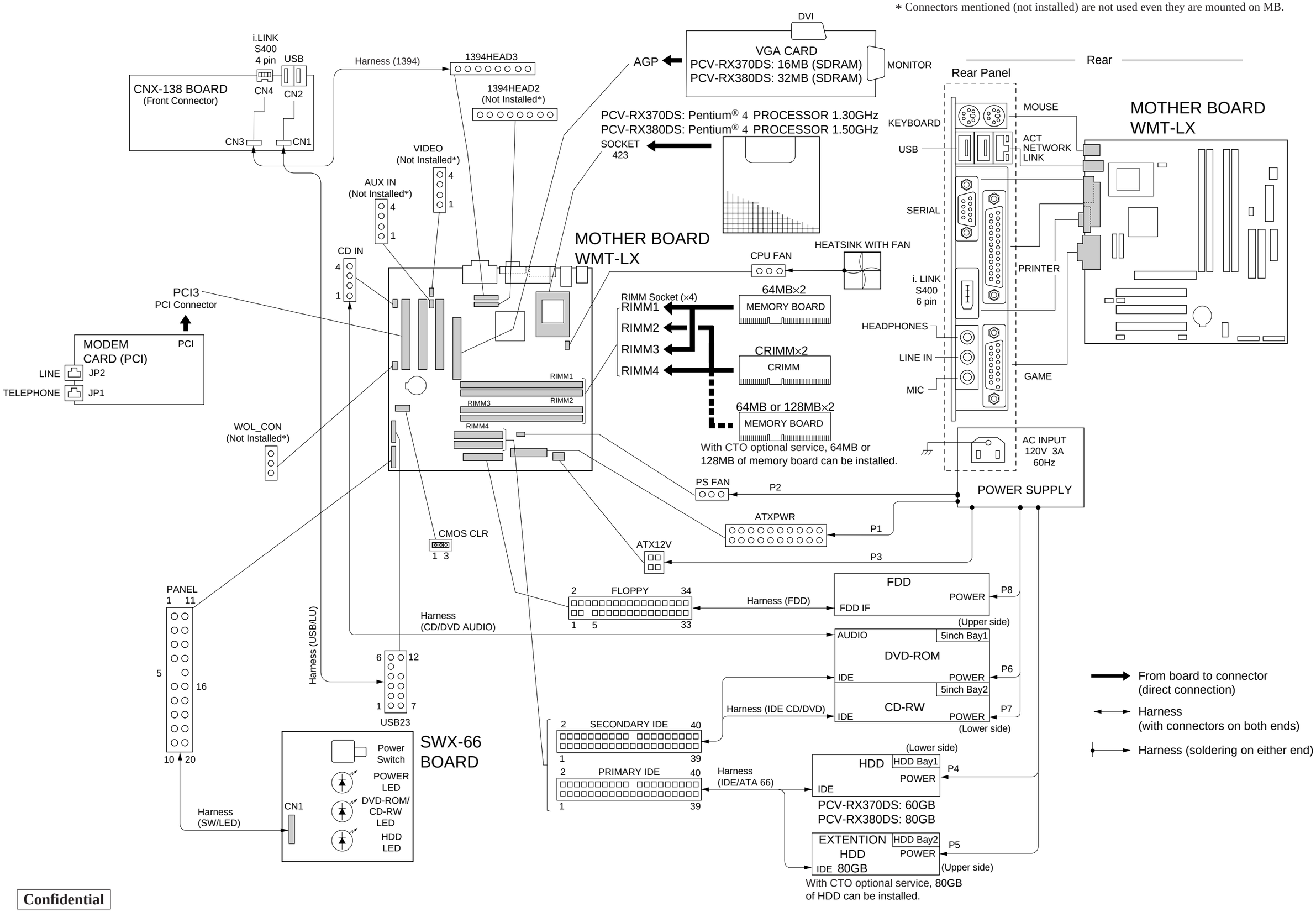
6-2. FRAME HARNESS DIAGRAM (for PCV-RX360DS)

∗ Connectors mentioned (not installed) are not used even they are mounted on MB.



(for PCV-RX370DS/RX380DS)

∗ Connectors mentioned (not installed) are not used even they are mounted on MB.



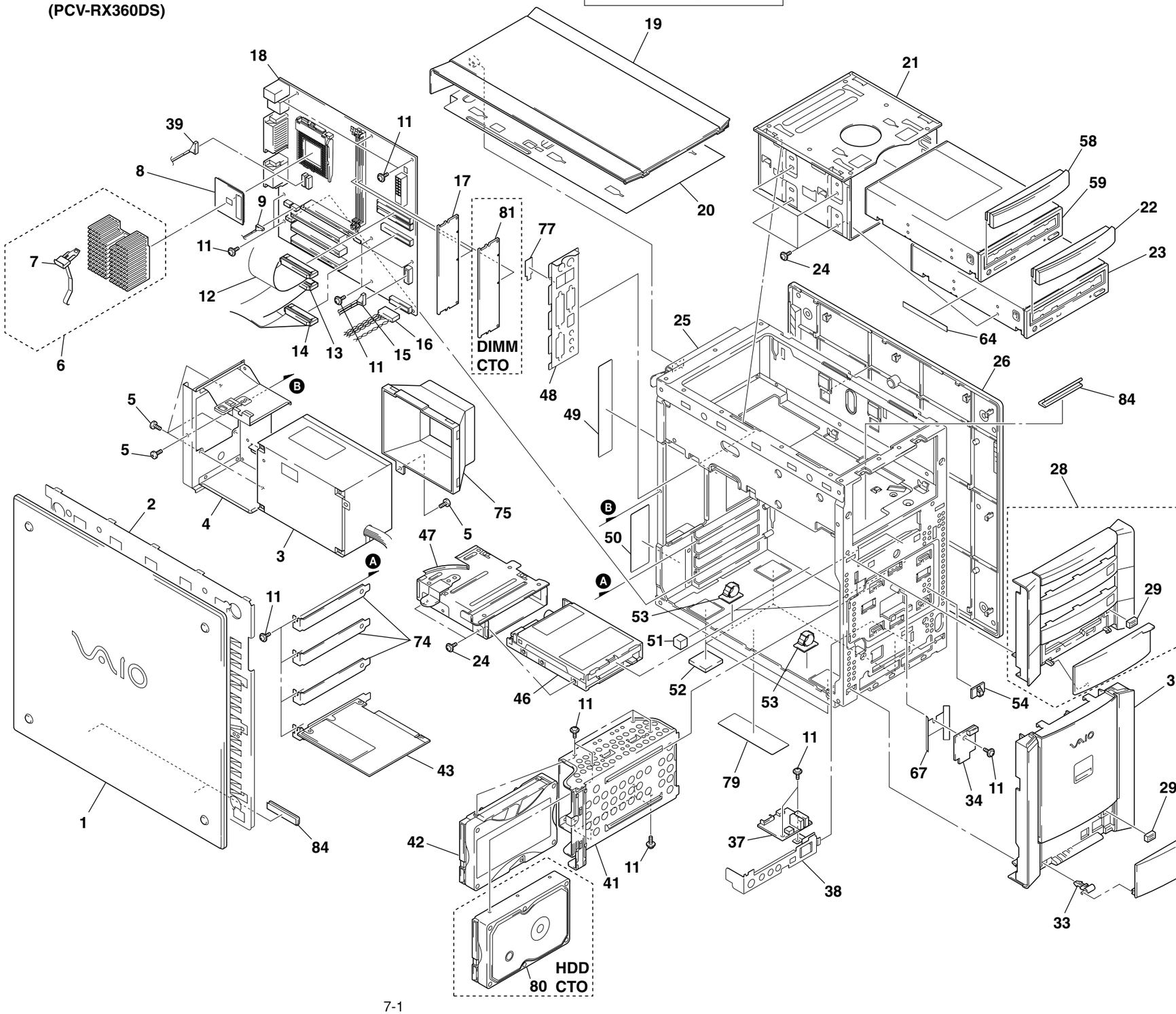
SECTION 7
REPAIR PARTS LIST

NOTE:
- The parts listed here are for service, and therefore they may be different from the parts shown in circuit diagrams or used in the set.
- The category “O” in S/P column denotes that the parts are not always stocked.
- The parts with ♦ marking are stocked at the Division.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

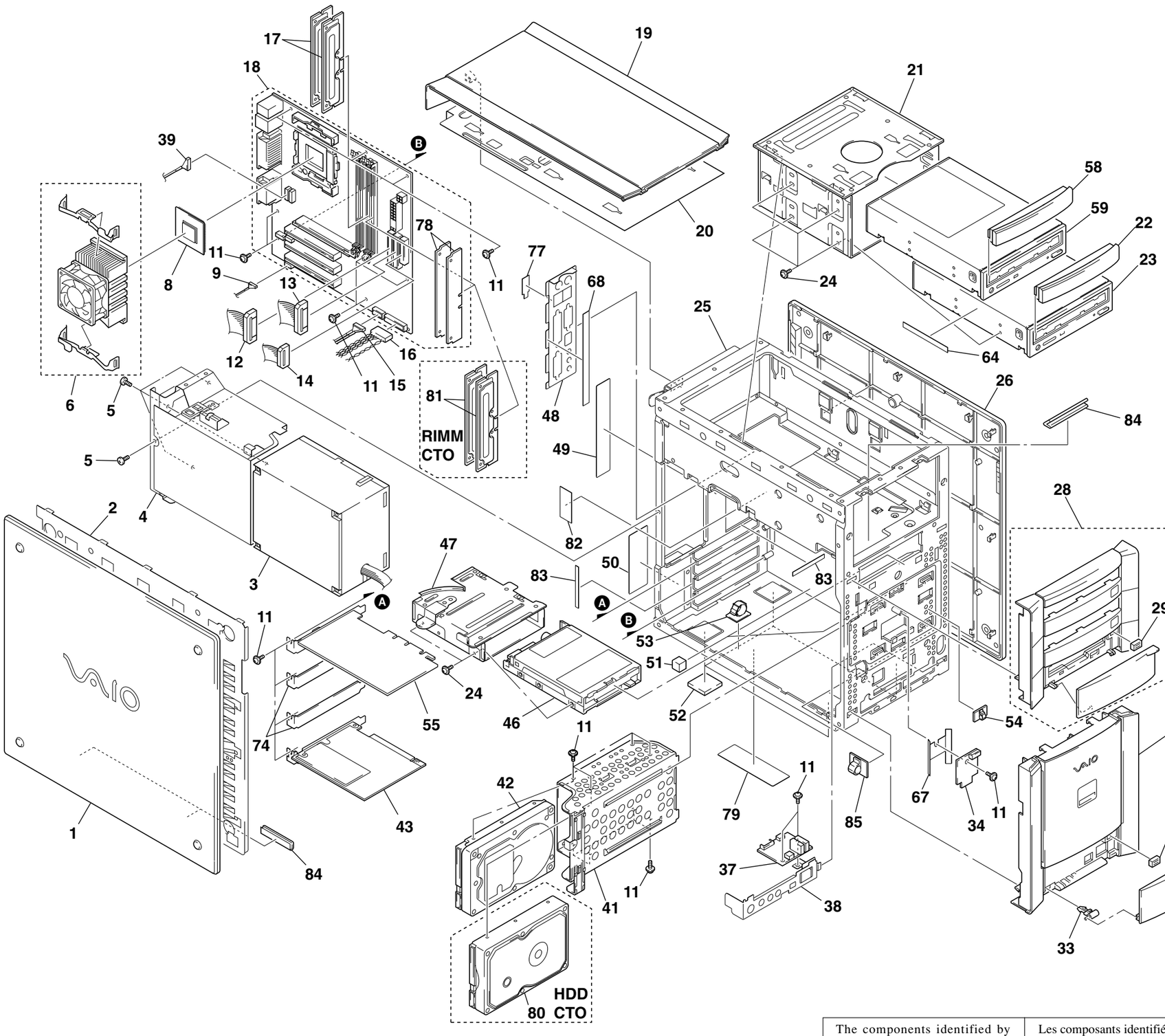
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

7-1. EXPLODED VIEWS AND PARTS LIST (PCV-RX360DS)



S/P	Ref. No.	Part No.	Description	Remark
S	1	4-648-912-12	PANEL, LEFT	
O	2	X-4623-012-1	LEFT CHASSIS ASSY	
⚠S	3	1-468-417-71	POWER, SWITCHING	
O	4	X-4623-019-1	BRACKET POWER SUPPLY ASSY	
S	5	4-635-795-01	SCREW (NO.6-32UNC)	
O	6	A-8047-716-A	SINK ASSY, HEAT	
O	7	4-648-811-01	HOLDER, HEAT SINK	
S	♦8	A-8047-334-A	CPU (P3/866MHZ) ASSY (S)	
S	9	1-958-973-51	HARNESS (CD-DVD AUDIO)	(for DVD-ROM)
S	11	4-645-944-01	SCREW (SW) (NO.6-32UNC)	
S	12	1-959-912-31	HARNESS (IDE CD/DVD)	
S	13	1-960-364-31	HARNESS (IDE/ATA66)	
S	14	1-959-946-41	HARNESS (FDD)	
S	15	1-960-947-31	HARNESS (USB/LU)	
S	16	1-959-913-21	HARNESS (SW/LED)	
S	17	8-749-018-20	DIMM 128MB (HYM7V631601BTFG-75)	
S	♦18	A-8049-310-A	MOTHER BOARD (WI2) ASSY (S)	
S	19	4-648-911-11	PANEL, TOP	
S	20	4-648-889-01	UPPER CHASSIS	
O	21	X-4623-008-1	CD HOLDER ASSY	
S	22	4-648-882-12	ESCUTCHEON (S)	
S	♦23	A-8048-265-A	CD-RW DRIVE (140E-T3) ASSY (S)	
S	24	7-682-903-01	SCREW +PWH 3X5	
O	25	X-4623-521-1	MAIN CHASSIS ASSY	
S	26	4-648-910-11	PANEL, RIGHT	
S	28	A-8048-942-A	PANEL ASSY (UPPER) (FOR 2 BAY)	
S	29	4-646-810-01	MAGNET	
S	31	X-4623-517-1	PANEL ASSY (LOWER) (US), FRONT	
S	32	X-4623-593-1	DOOR (AUDIO) ASSY (U)	
S	33	4-045-250-21	DAMPER	
S	♦34	1-761-387-11	BOARD, SWX-66	
S	♦37	1-681-235-11	BOARD, CNX-138	
O	38	X-4623-522-1	BRACKET AV ASSY	
S	39	1-959-197-21	HARNESS (1394)	
O	41	X-4623-010-2	HDD BRACKET ASSY	
S	♦42	1-772-938-11	HDD/S-U5 (40GB)	
S	♦43	1-761-314-41	MODEM CARD (PCI)	
S	♦46	A-8048-751-A	FDD (920-E/EK3) ASSY (S)	
O	47	X-4623-520-1	FDD BRACKET ASSY	
O	48	X-4623-543-1	BRACKET ATX (VGA) ASSY	
O	49	4-652-525-01	LABEL, I/O	
O	50	4-652-524-01	LABEL, SLOT	
O	51	4-650-918-01	SPACER, MB	
S	52	4-643-547-01	FOOT	
O	53	4-640-554-11	CABLE CLAMP	
O	54	4-640-554-21	CABLE CLAMP	
S	58	4-648-913-02	ESCUTCHEON (P)	
S	♦59	1-796-084-11	DVD-ROM/P-G6TR (16X)	
O	60	4-652-537-01	LABEL, ID	
O	64	4-651-683-01	SPACER, CD-RW	
O	67	4-651-252-01	SHIELD, LED	
O	74	4-650-779-01	PANEL, PCI SLOT	
O	75	4-650-192-01	DUCT, PS FUN	
O	77	4-649-870-11	LABEL (ETHER), CAUTION	
O	79	4-652-540-01	LABEL, SAFETY	
S	♦80	1-796-089-11	HDD/M-LEO (80GB) for CTO Option	
S	81	8-749-018-19	DIMM 256MB (MC-4532CD647PF-A75)	for CTO Option
S	81	8-749-018-20	DIMM 128MB (HYM7V631601BTFG-75)	for CTO Option
O	84	4-078-636-01	GASKET (A)	

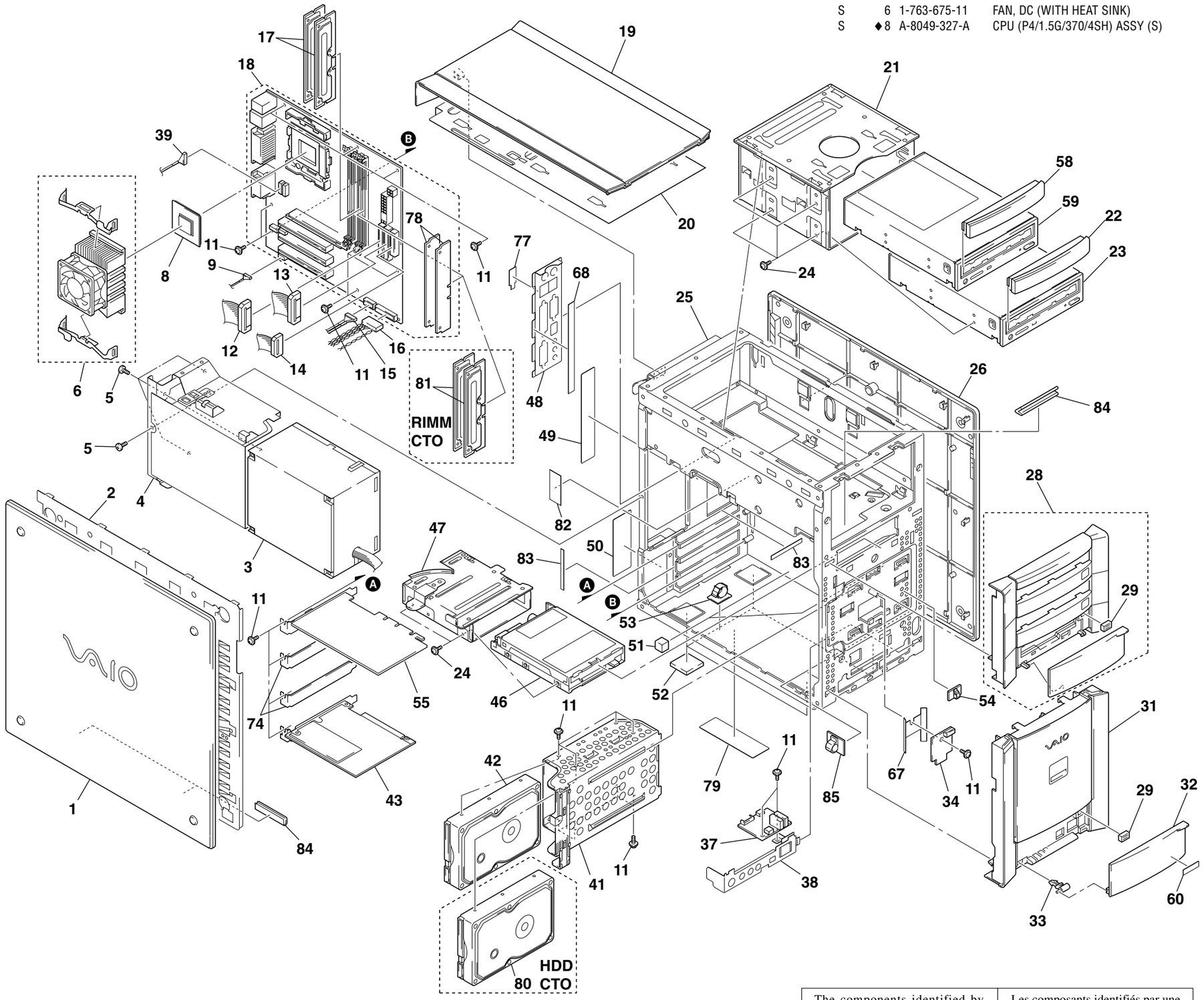
7-2. EXPLODED VIEWS AND PARTS LIST (PCV-RX370DS)



S/P	Ref. No.	Part No.	Description	Remark
S	1	4-648-912-12	PANEL, LEFT	
O	2	X-4623-012-1	LEFT CHASSIS ASSY	
⚠S	3	1-468-601-11	POWER, SWITCHING	
O	4	X-4623-542-1	BRACKET PS (280W) ASSY	
S	5	4-635-795-01	SCREW (NO.6-32UNC)	
S	6	1-763-675-11	FAN, DC (WITH HEAT SINK)	
S	♦8	A-8049-329-A	CPU (P4/1.3G/370/4SF) ASSY (S)	
S	9	1-958-973-51	HARNESS (CD-DVD AUDIO)	(for DVD-ROM)
S	11	4-645-944-01	SCREW (SW) (NO.6-32UNC)	
S	12	1-959-912-31	HARNESS (IDE CD/DVD)	
S	13	1-960-364-31	HARNESS (IDE/ATA66)	
S	14	1-959-946-41	HARNESS (FDD)	
S	15	1-960-947-31	HARNESS (USB/LU)	
S	16	1-959-913-21	HARNESS (SW/LED)	
S	17	8-749-019-40	RIMM 64MB (MR16R0824AN1-CK8)	
S	17	8-749-019-79	RIMM 64MB (MR16R0824BN1-CK8)	
S	♦18	A-8049-308-A	MOTHER BOARD (YO) ASSY (S)	
S	19	4-648-911-11	PANEL, TOP	
O	20	4-648-889-01	UPPER CHASSIS	
O	21	X-4623-008-1	CD HOLDER ASSY	
S	22	4-648-882-12	ESCUTCHEON (S)	
S	♦23	A-8048-265-A	CD-RW DRIVE (140E-T3) ASSY (S)	
S	24	7-682-903-01	SCREW +PWH 3X5	
O	25	X-4623-521-1	MAIN CHASSIS ASSY	
S	26	4-648-910-11	PANEL, RIGHT	
S	28	A-8048-942-A	PANEL ASSY (UPPER) (FOR 2 BAY)	
S	29	4-646-810-01	MAGNET	
S	31	X-4623-517-1	PANEL ASSY (LOWER) (US), FRONT	
S	32	X-4623-593-1	DOOR (AUDIO) ASSY (U)	
S	33	4-045-250-21	DAMPER	
S	♦34	1-761-387-11	BOARD, SWX-66	
S	♦37	1-681-235-11	BOARD, CNX-138	
O	38	X-4623-522-1	BRACKET AV ASSY	
S	39	1-959-197-21	HARNESS (1394)	
O	41	X-4623-010-2	HDD BRACKET ASSY	
S	♦42	1-796-090-11	HDD/I-TEP (60GB)	
S	♦42	A-8110-895-A	HDD(S-U6/60G)ASSY(S)	
S	♦43	1-761-314-41	MODEM CARD (PCI)	
S	♦46	A-8048-751-A	FDD (920-E/EK3) ASSY (S)	
O	47	X-4623-520-1	FDD BRACKET ASSY	
O	48	X-4623-108-1	BRACKET ATX ASSY (1394)	
O	49	4-649-490-01	LABEL, I/O	
O	50	4-649-501-02	LABEL, SLOT	
O	51	4-650-918-01	SPACER, MB	
S	52	4-643-547-01	FOOT	
O	53	4-640-554-11	CABLE CLAMP	
O	54	4-640-554-21	CABLE CLAMP	
S	♦55	1-761-377-21	CARD, VGA (GE FORCE 2)	
S	58	4-648-913-02	ESCUTCHEON (P)	
S	♦59	1-796-084-11	DVD-ROM/P-G6TR (16X)	
O	60	4-652-536-01	LABEL, ID	
O	64	4-651-683-01	SPACER, CD-RW	
O	67	4-651-252-01	SHIELD, LED	
O	68	4-651-516-01	TAPE (160), CONDUCTIVE	
O	74	4-650-779-01	PANEL, PCI SLOT	
O	77	4-649-870-11	LABEL (ETHER), CAUTION	
S	78	1-761-410-11	CRIMM (YO)	
O	79	4-652-539-01	LABEL, SAFETY	
S	♦80	1-796-089-11	HDD/M-LEO (80GB) for CTO Option	
S	81	8-749-019-40	RIMM 64MB (MR16R0824AN1-CK8)	for CTO Option
S	81	8-749-019-53	RIMM 128MB (MR16R0828AN1-CK8)	for CTO Option
S	81	8-749-019-79	RIMM 64MB (MR16R0824BN1-CK8)	for CTO Option
O	82	4-653-928-01	TAPE (85), CONDUCTIVE	
O	83	4-653-929-01	GASKET (85)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

7-3. EXPLODED VIEWS AND PARTS LIST (PCV-RX380DS)



S/P	Ref. No.	Part No.	Description	Remark
S	1	4-648-912-12	PANEL, LEFT	
O	2	X-4623-012-1	LEFT CHASSIS ASSY	
⚠S	3	1-468-601-11	POWER, SWITCHING	
O	4	X-4623-542-1	BRACKET PS (280W) ASSY	
S	5	4-635-795-01	SCREW (NO.6-32UNC)	
S	6	1-763-675-11	FAN, DC (WITH HEAT SINK)	
S	♦8	A-8049-327-A	CPU (P4/1.5G/370/4SH) ASSY (S)	
S	9	1-958-973-51	HARNESS (CD-DVD AUDIO)	(for DVD-ROM)
S	11	4-645-944-01	SCREW (SW) (NO.6-32UNC)	
S	12	1-959-912-31	HARNESS (IDE CD/DVD)	
S	13	1-960-364-31	HARNESS (IDE/ATA66)	
S	14	1-959-946-41	HARNESS (FDD)	
S	15	1-960-947-31	HARNESS (USB/LU)	
S	16	1-959-913-21	HARNESS (SW/LED)	
S	17	8-749-019-40	RIMM 64MB (MR16R0824AN1-CK8)	
S	17	8-749-019-79	RIMM 64MB (MR16R0824BN1-CK8)	
S	♦18	A-8049-308-A	MOTHER BOARD (YO) ASSY (S)	
S	19	4-648-911-11	PANEL, TOP	
O	20	4-648-889-01	UPPER CHASSIS	
O	21	X-4623-008-1	CD HOLDER ASSY	
S	22	4-648-882-21	ESCUTCHEON (S)	
S	♦23	A-8049-315-A	CD-RW DRIVE (160E-T3MM) ASSY (S)	
S	24	7-682-903-01	SCREW +PWH 3X5	
O	25	X-4623-521-1	MAIN CHASSIS ASSY	
S	26	4-648-910-11	PANEL, RIGHT	
S	28	A-8048-942-A	PANEL ASSY (UPPER) (FOR 2 BAY)	
S	29	4-646-810-01	MAGNET	
S	31	X-4623-517-1	PANEL ASSY (LOWER) (US), FRONT	
S	32	X-4623-593-1	DOOR (AUDIO) ASSY (U)	
S	33	4-045-250-21	DAMPER	
S	♦34	1-761-387-11	BOARD, SWX-66	
S	♦37	1-681-235-11	BOARD, CNX-138	
O	38	X-4623-522-1	BRACKET AV ASSY	
S	39	1-959-197-21	HARNESS (1394)	
O	41	X-4623-010-2	HDD BRACKET ASSY	
S	♦42	1-796-089-11	HDD/M-LEO (80GB)	
S	♦43	1-761-314-41	MODEM CARD (PCI)	
S	♦46	A-8048-751-A	FDD (920-E/EK3) ASSY (S)	
O	47	X-4623-520-1	FDD BRACKET ASSY	
O	48	X-4623-108-1	BRACKET ATX ASSY (1394)	
O	49	4-649-490-01	LABEL, I/O	
O	50	4-649-501-02	LABEL, SLOT	
O	51	4-650-918-01	SPACER, MB	
S	52	4-643-547-01	FOOT	
O	53	4-640-554-11	CABLE CLAMP	
O	54	4-640-554-21	CABLE CLAMP	
S	♦55	1-761-377-11	CARD, VGA	
S	58	4-648-913-02	ESCUTCHEON (P)	
S	♦59	1-796-084-11	DVD-ROM/P-G6TR (16X)	
O	60	4-652-535-01	LABEL, ID	
O	67	4-651-252-01	SHIELD, LED	
O	68	4-651-516-01	TAPE (160), CONDUCTIVE	
O	74	4-650-779-01	PANEL, PCI SLOT	
O	77	4-649-870-11	LABEL (ETHER), CAUTION	
S	♦78	1-761-410-11	CRIMM (YO)	
O	79	4-652-538-01	LABEL, SAFETY	
S	♦80	1-796-089-11	HDD/M-LEO (80GB) for CTO Option	
S	81	8-749-019-40	RIMM 64MB (MR16R082AN1-CK8)	for CTO Option
S	81	8-749-019-53	RIMM 128MB (MR16R0828AN1-CK8)	for CTO Option
S	81	8-749-019-79	RIMM 64MB (MR16R0824BN1-CK8)	for CTO Option
O	82	4-653-928-01	TAPE (85), CONDUCTIVE	
O	83	4-653-929-01	GASKET (85)	
O	84	4-078-636-01	GASKET (A)	
O	85	4-640-554-01	CABLE CLAMP	

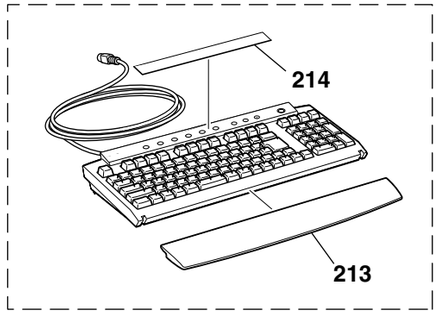
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MEMO

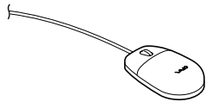
7-4. ACCESSORIES AND PARTS LIST

201
POWER CORD (1)

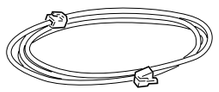
204
KEYBOARD (1)



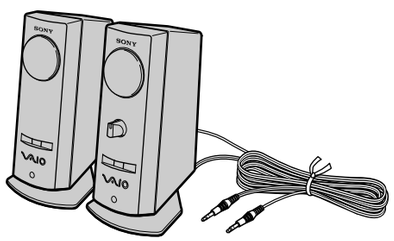
205
MOUSE (1)



207
MODEM CABLE (1)



215
SPEAKER UNIT (1)

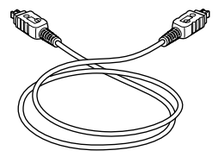


S/P	Ref. No.	Part No.	Description	Remark
			ACCESSORIES & PACEKING MATEIRALS	
			**********	
S		4-653-603-01	(RX370DS/RX380DS)...QUICK START	
S		4-653-605-01	(RX360DS)...QUICK START	
S		4-653-606-01	(RX370DS/RX380DS)...USER GUIDE	
S		4-653-610-01	(RX360DS)...USER GUIDE	
⚠S	201	1-777-786-11	CORD, AC	
S	♦ 204	1-772-704-51	KEY BOARD (US)	
S	♦ 205	1-772-207-71	WHEEL MOUSE (PS/2)	
S	207	1-782-207-11	CABLE, MODEM	
S	209	1-790-145-21	CORD, WITH CONNECTOR (i.LINK)	
S	213	9-885-008-07	REST, PALM	
S	214	9-885-000-89	PLATE (PLAIN), TOP	
S	215	1-529-892-11	SPEAKER UNIT	
⚠S	216	1-476-386-11	ADAPTOR, AC (for SPEAKER UNIT)	

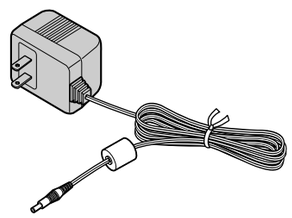
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

209
i.LINK CABLE (1)



216
AC ADAPTOR (1)



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English
2003I0500-2
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Revision History

Suffix	Ver.	Date	Contents	QM No.
-11	Ver. 1	2001.1.	First Edition	
-12	Ver. 2	2003.12.25	QUICK MEMO reflection (FIT-D2001_001,FIT-D2001_003,FIT-D2002_164) (FIT-D2003_028)	FIT-D2003_205

< Remarks >